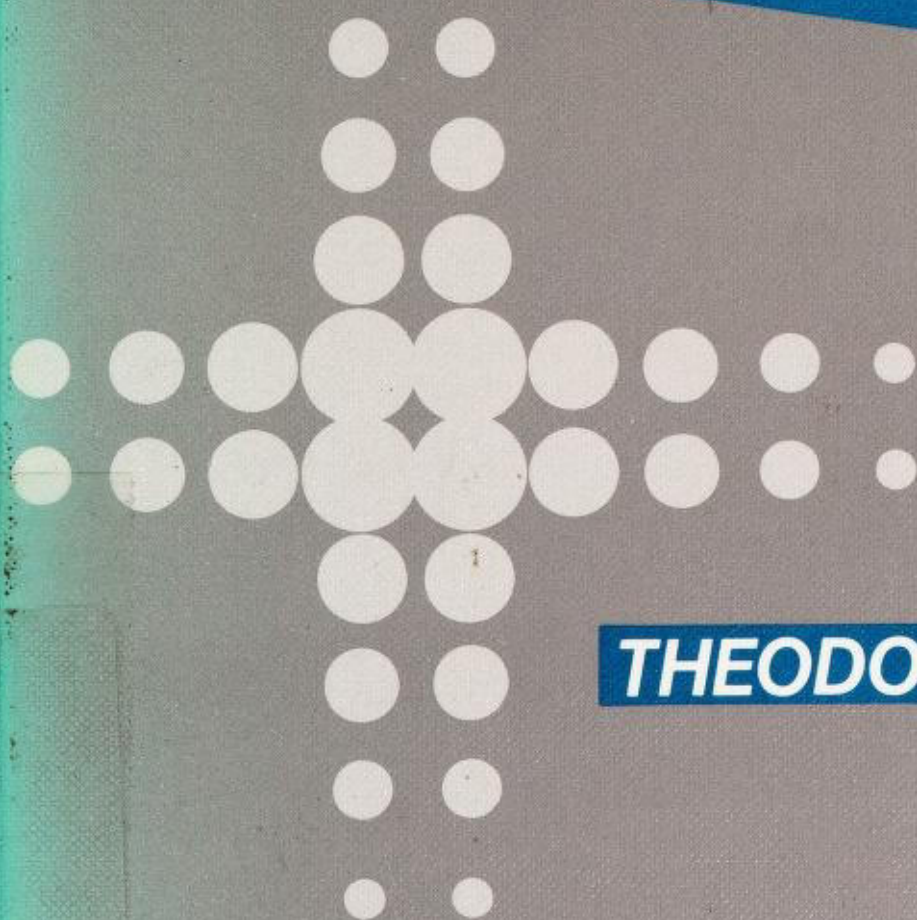


GUIDE TO THE

Literature of
Pharmacy
and the
*Pharmaceutical
Sciences*




THEODORA ANDREWS

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Guide to the Literature of Pharmacy and the Pharmaceutical Sciences

Reference Sources in Science and Technology Series

Guide to the Literature of Pharmacy and the Pharmaceutical Sciences

Theodora Andrews

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1986

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PREFACE

The primary intended audience for this guide is librarians, especially those in pharmaceutical, medical, health science, and related libraries. In addition, health science practitioners and research scientists in pharmaceutical and ancillary fields may find it of value. An attempt has been made to cover all pharmaceutical areas but to avoid overlapping fields such as chemistry, biochemistry, or medicine. However, some of the materials are of interest to workers in those fields, and works intended especially for physicians, veterinarians, and nurses have been included if they deal with drug therapy. Likewise, some chemistry titles have been listed if they deal extensively with substances that have medicinal uses.

This work was attempted because a need for a new comprehensive guide to the literature of pharmacy and the pharmaceutical sciences was identified. Several useful guides (listed in Part I, chapter 1) already exist, but they are either dated, such as those by Bloomfield, Brunn, and Pasztor (entries 7, 8, and 21); not annotated, such as the basic list compiled by Piermatti (entry 22); or brief or cover only a limited aspect or area of the field, such as those by Fenichel, Glunz, Londos, Revill, and Sewell (entries 14, 15, 18, 23, and 25). Sewell's guide is probably the most significant work, but it deals only with drug information sources rather than the entire pharmaceutical field.

This guide emphasizes reference works, which are treated in Part I. In addition to the conventional bibliographies, abstracts and indexing services, reviews, dictionaries, encyclopedias, directories, handbooks, manuals, and guides, there is a large section listing drug compendia and one covering materials on drug reactions and interactions.

Part II, "Source Material by Subject Area," lists treatises and textbooks (especially the standard ones), arranged under broad headings corresponding to the various subdisciplines of pharmacy. An attempt was made to avoid creating too many

categories in this part because there is a good deal of overlapping of materials among the various areas of the field. The material is divided into pharmacy practice, industrial and physical pharmacy, medicinal chemistry and pharmacognosy, and pharmacology and toxicology. In addition, there is a section covering the closely related area of cosmetics (including perfumes and flavors), and there is also a section on drug abuse. The latter section is brief because a more comprehensive treatment of this material is available in two other bibliographies prepared by Andrews: *A Bibliography of Drug Abuse, Including Alcohol and Tobacco* (entry 3) and *A Bibliography of Drug Abuse: Supplement, 1977-1980* (entry 4).

Part III presents a long list of currently published periodicals and a section covering computerized databases.

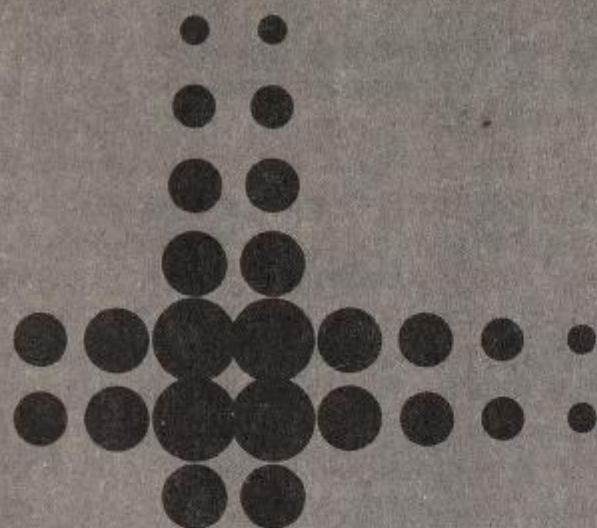
Works included in this guide were perceived to have current reference and research value. To keep the book to a reasonable length, it was necessary to be selective.

An attempt has been made to provide complete bibliographic information for all entries, although occasionally Library of Congress (LC) card numbers, International Standard Book Numbers (ISBN), International Standard Serial Numbers (ISSN), and price have been omitted if this information was difficult to locate or seemed nonexistent.

As can be seen, the materials of this field are costly, and new editions are published frequently because of rapid changes and new developments in the subject matter. New drug compendia, particularly, are being published at an accelerated rate to make information available about new drugs. The same is true of works that report adverse drug reactions and interactions.

Much of the material included in this bibliography is little known to those outside the pharmaceutical field. However, as the interest in drugs grows and the consumer becomes more involved with his own health care, more titles are becoming available that are directed to the patient. In addition, the librarian is increasingly asked to assist in providing drug information, both to the health care professional and to the consumer.

It is hoped that this bibliography will prove valuable to librarians and others interested in the various aspects of the subject, including individuals in pharmacy practice and those involved with research and the manufacture of drug products.



PART I

REFERENCE SOURCES

1 Guides to the Literature and Bibliographies

A number of publications are available that provide guidance in the use of the literature of the pharmaceutical sciences. Some of them are highly specialized, and others provide more general coverage of the field. Those by Bloomfield, Brunn, Fenichel, Glunz, Londos, Pasztor, Piermatti, Revill, and Sewell (entries 7, 8, 14, 15, 18, 21, 22, 23, and 25) are somewhat general, although the latter two publications deal exclusively with drug information sources. The literature of this area has grown in importance because the emphasis in the training of the practicing pharmacist for the past 10-15 years has been on their providing drug information to other health care professionals and to the patient.

The remainder of the titles listed in this section cover more specialized aspects of the field. The two titles by Abel (entries 1 and 2), two by Andrews (entries 3 and 4), and those by Chrusciel, Duke, Kalant, Menditto, Ruben, the U.S. Bureau of Narcotics and Dangerous Drugs, and Waller (entries 10, 11, 17, 19, 24, 27, and 30) all deal with drug abuse, a problem area that has remained critical throughout the world for the past two decades. The titles by Cain, Neu, and the University of Wisconsin (entries 9, 20, and 28) are catalogs of special collections that are important because of their uniqueness, comprehensiveness, or quality. Two titles deal with herbs, those by Andrews and Simon (entries 5 and 26). Herbal medicine has occupied the attention of the public and the mass media, as well as professionals, for the past few years.

Other special areas dealt with include a periodicals list by Andrews (entry 6), which is old but the only comprehensive list ever compiled; a bibliography of reviews in medicinal chemistry by Ellis (entry 12); sources of statistical information of value to pharmacists by Hall (entry 16); and a guide to toxicology literature by Wexler (entry 31). The latter covers a field important to those dealing with medicinal substances. The bibliography on prostaglandins by the Upjohn Company (entry 29) provides a comprehensive coverage of an important class of compounds currently under investigation. Lastly,

4 / Part I—Reference Sources

there is a comprehensive bibliography on the fate of drugs in the organism (entry 13), a publication covering a subject in which scientific strides are being made.

1. Abel, Ernest L., comp. **A Comprehensive Guide to the Cannabis Literature**. Westport, CT: Greenwood Press, 1979. 699p. index. \$37.50. LC 78-20014. ISBN 0-313-32721-6.

The literature covered in this bibliography was published before 1978. It deals with the marijuana plant (*cannabis sativa* L.) in virtually all of its aspects: psychotomimetic properties, industrial usage, cultivation, history, and legal status. The coverage is quite comprehensive, including materials from both popular and scholarly books and periodicals. In addition, some foreign language sources that have been translated into English have been included. No items from newspapers have been listed.

The 8177 entries are arranged alphabetically by senior author in one sequence, except for a supplementary addendum containing unintentionally omitted items and those published after the main bibliography was compiled. The latter is arranged in a separate alphabetical sequence. The compiler has supplied an introductory essay of about 20 pages that covers historical background, chemistry, analysis, pharmacology, physiologic effects, therapeutic uses, prevalence, behavioral effects, and psychiatric considerations. A list of abbreviations of journals cited has been provided.

There are no annotations. Although there is a subject index, there is no access by author except through the senior author. A limited spot check of a few entries showed an unusually high number of errors in references.

2. Abel, Ernest L., comp. **Drugs and Sex: A Bibliography**. Westport, CT: Greenwood Press, 1983. 129p. index. \$29.95. LC 83-5656. ISBN 0-313-23941-X.

Abel is a research scientist who has prepared several bibliographies on topics related to drug abuse. This work treats a topic of perpetual interest, substances that may have an effect on sex drive or performance. The consensus of opinion currently is that there is no such thing as an aphrodisiac. The rise of the drug culture, however, has increased interest in investigating substances that may have a negative impact on sexuality, normal performance, or the physiology of sex. There is also interest in scrutinizing certain substances that are used to treat nonsexual problems because they may have side effects that cause sexual dysfunction.

Abel's rather comprehensive bibliography begins with an essay that defines some of the technical terms he uses; discusses mechanisms of action of drugs; and individually treats alcohol, amphetamines, antidepressants, barbiturates, benzodiazepines, caffeine, cocaine, LSD, marijuana, methaqualone, narcotics, nitrites, phencyclidine, and tobacco. The 1432 references are then listed alphabetically by author under these headings plus "Antipsychotics" and "General Reviews." There is a subject index only; to find an individual author's work one must search through each section.

The bibliography makes an important contribution because there are no other extensive lists on this subject, and the general public as well as researchers are interested in it.

3. Andrews, Theodora. **A Bibliography of Drug Abuse, Including Alcohol and Tobacco**. Littleton, CO: Libraries Unlimited, 1977. 206p. index. \$18.00 LC 77-22606. ISBN 0-87287-149-5.

This annotated bibliography includes representative titles on all levels and on virtually all aspects of the subject of substance abuse. The intent of the author was to assist interested individuals, particularly librarians, in selecting materials from the large number of titles available. In addition, the book should be helpful in providing guidance for reference service in libraries. The work is reasonably comprehensive; over 700 titles are listed, including general reference sources, periodicals, and treatises. The annotations, each about 200 words in length, are descriptive and critical.

Each section of the book is introduced by a short essay that provides an overall view of the literature in the section to follow. Reflecting the trends in the literature of the period covered by the book (about 1960-1976), alcohol and tobacco do not receive as much emphasis as other abused substances. The work has been favorably received.

4. Andrews, Theodora. **A Bibliography of Drug Abuse: Supplement, 1977-1980.** Littleton, CO: Libraries Unlimited, 1981. 312p. index. \$27.50. LC 81-8194. ISBN 0-87287-252-1.

The purpose of this volume is the same as that of the original bibliography (see entry 3). Also, the arrangement and coverage of material and the type of annotations are similar to those of the earlier work. A few more titles have been included, however, making the supplementary volume larger.

The book updates the first volume and reflects changes in the emphasis of the literature on the subject. More recent works on drug abuse have emphasized the increasing abuse of alcohol; some substances (notably marijuana) have been found to be more toxic than formerly presumed; results of treatment for all kinds of substance abuse have been disappointing; and drug abuse education and prevention have not been very successful. On the positive side, however, more research has taken place, some of it significant.

The book was well reviewed and was selected as an outstanding reference book in 1983 by *Choice* magazine.

5. Andrews, Theodora. **A Bibliography on Herbs, Herbal Medicine, "Natural" Foods, and Unconventional Medical Treatment.** With the assistance of William L. Corya and Donald A. Stickel, Jr. Littleton, CO: Libraries Unlimited, 1982. 339p. index. \$30.00. LC 82-128. ISBN 0-87287-288-2.

Modern drugs have their origins in plant substances. Scientists have found them to be valuable because they suggest possible uses for constituents that can be extracted from the plants. In addition, plant materials have served as prototypes that have inspired medicinal chemists to synthesize similar drugs with even more desirable properties. This bibliography covers a wide range of topics related to herbs and to the related areas of "health" foods and unorthodox medical treatment. Both scientific and popular books are included. Listed are what are believed to be some of the best works in the field, representative examples of poor ones, and some unusual titles.

Reference works and treatises make up the bulk of the materials reviewed, although periodicals are also included. Reference works are grouped in Part I; treatises in Part II. Each chapter of the bibliography is preceded by a few remarks that characterize the literature of that chapter.

A good deal of the material will interest pharmacognosists, such as the chapters on herbs, medicinal plants and their constituents, and poisonous plants. Other chapters are of general interest in the field of pharmacy, including those on vitamins and minerals, spices, and cosmetics.

6 / Part I—Reference Sources

The book was selected by *Choice* magazine as one of the Outstanding Academic Books, 1982-1983.

6. Andrews, Theodora, and J. Oslet. **World List of Pharmacy Periodicals—Revised and Enlarged Edition, 1975.** Bethesda, MD: American Society of Hospital Pharmacists, 1975. 38p. index. \$2.75pa. (Reprinted from the *American Journal of Hospital Pharmacy*, Vol. 32, No. 1, January 1975).

This is a comprehensive listing of 1940 periodicals from more than 65 countries. For the most part, titles were included that were published annually or more frequently. A great many ephemeral and discontinued titles and newsletters are among those included. All aspects of pharmacy are covered (formulation, retail, hospital, clinical, manufacturing, etc.), pharmacology, pharmacognosy, toxicology, and some related material in the soap, perfumery, and cosmetics field. Also listed are drug abuse and alcoholism journals.

Entries include the following: journal title, address of publisher, frequency, type, and sources in which the periodical is indexed or abstracted (if known).

Although lists of periodicals become obsolete rapidly, publications such as this have historical value.

7. Bloomfield, J. C. **Drug Information Sources: A Bibliography.** Belgium: Fédération Internationale Pharmaceutique, 1970. 26p. (Reprinted from *Journal Mondial de Pharmacie*, Vol. 13, No. 4, 1970).

Although brief and somewhat out of date now, this bibliography is of interest because it lists pharmaceutical reference sources from a number of foreign countries. Many of the publications are obscure.

The main section of the work lists the publications by country under these headings: pharmacopoeias and formularies, general reference sources, pharmacology and therapeutics, medical and pharmaceutical nomenclature, first aid and toxicology, tablet and capsule identification, pharmaceutical legislation, indexes and card filing systems, price lists of pharmaceutical products, and journals.

Also included is a short list of publications used internationally.

8. Brunn, Alice Lefler. **How to Find Out in Pharmacy: A Guide to Sources of Pharmaceutical Information.** New York: Pergamon Press, 1969. 130p. bibliog. index. (The Commonwealth and International Library of Science, Technology, Engineering, and Liberal Studies). LC 70-75383. ISBN 08-013949-3; 08-013948-5pa.

The stated purpose of this small book is twofold: to provide an introduction to the libraries and literature of pharmacy for students of the field and to provide a reference guide to the literature for advanced pharmacy students, practicing pharmacists and other health science professionals, libraries, and interested laypersons. It is limited in subject coverage for the most part to materials that are strictly pharmacy.

The work is presented in the style of a bibliographic essay rather than an annotated list. Chapter headings are: (1) Overview of the field; (2) Periodicals and indexing and abstracting services; (3) Bibliographies, guide to use of libraries; (4) Law, welfare, marketing, physical pharmacy, drug adulteration control; (5) Pharmacology and drug compendia; and (6) Crude drugs, practical pharmacy, pharmacodynamics, toxicology. Two appendices also have been included: (I) List of libraries with special collections in pharmacy and of large general medical libraries: United States and Canada, and (II) List of libraries with special collections in pharmacy and of general medical libraries, Great Britain and Ireland.

The book is of high quality and still useful if one allows for the fact that it was published a number of years ago.

9. Cain, Alexander. **Pharmacopeias, Formularies, Dispensatories**. Chicago, IL: Library of the Health Sciences, University of Illinois at the Medical Center, no date. 99p. illus. bibliog. index. (Special Collections Catalog).

This catalog, which lists titles held by the University of Illinois Library of Health Sciences, is divided into two sections. The first is arranged by country and the second by author. The second section lists private compilations, whereas the first section presents national collections. There is a name index and a chronologic one, the latter covering the years 1515-1972.

The publication is nicely done with attractive illustrations reproduced from some of the early works listed.

10. Chrusciel, T. L., and M. Chrusciel, comps. **Selected Bibliography on Detection of Dependence-Producing Drugs in Body Fluids**. Geneva: World Health Organization, 1975. 67p. (WHO Offset Publication, No. 17). \$6.00 ISBN 92-4-052004-X.

This comprehensive bibliography includes unannotated references to scientific literature and bibliographic compilations published or prepared from about 1969 to 1974. A few older works have been included if relevant. Most of the materials referred to are periodical articles, but some books, conference proceedings, and reports also have been included. The references relate directly to the detection of dependence-producing drugs in body fluids or to technical problems connected with analytic methods employed.

Material is arranged alphabetically by author under the following headings: (1) Methods of detection; (2) Detection of opiates and synthetic narcotic drugs; (3) Detection of opiate antagonists; (4) Amphetamines and amphetamine-like substances; (5) Cocaine; (6) Ephedrine; (7) Barbiturates; (8) Other sedative and hypnotic drugs; (9) Cannabis; (10) Hallucinogens; and (11) Volatile substances.

11. Duke, James A., and others. **Annotated Bibliography on Opium and Oriental Poppies and Related Species**. Washington, DC: Agricultural Research Service, U.S. Department of Agriculture, 1973. 349p. index. (ARS-NE-28).

The National Agricultural Library (NAL) furnished many of the publications that facilitated the completion of this selective but extensive bibliography. The compilers believe it will serve concerned citizens and scientists in the campaign to curb drug abuse in the United States.

Presented are 2000 citations with some brief (often only one sentence) annotations. Arrangement is alphabetical by author, followed by the date of publication, title (with an indication if the language is other than English), publication information, and call number used at the NAL (call numbers used at a few other libraries are given when articles were not available at NAL).

Much highly technical literature from many countries is cited.

12. Ellis, G. P. **Medicinal Chemistry Reviews: A Select Bibliography**. Hamden, CT: Archon Books/Shoe String Press; London: Butterworth, 1972. 170p. index. \$14.50. ISBN 0-208-01258-3.

This publication was compiled to provide a guide to the important review literature in this subject area. It was based on an article originally published in *Progress in Medicinal Chemistry*, Vol. 6 (see entry 74) and expanded. Review literature is of

growing interest because it helps the user keep up to date in rapidly expanding fields. The bibliography is not comprehensive, but it is well selected for the period it covers (1950 to mid-1972). Most of the reviews are in English, but some French and German reviews are also included. The arrangement is by subject classification, and a detailed subject index is included. The classification is partly chemical and partly biologic. Research workers, information scientists, and librarians in medicinal chemistry and pharmacy, pharmacology and microbiology, organic chemistry and biochemistry, and the pharmaceutical industry will be especially interested in the work.

13. **The Fate of Drugs in the Organism: A Bibliographic Survey.** Vols. 1-4. Comp. by Société Française des Sciences et Techniques Pharmaceutiques Working Group under the chairmanship of J. Hirtz. New York: Marcel Dekker, 1974-77. 4 vols. About \$120.00 per volume. ISSN 0098-2806.

This series is a comprehensive bibliography on the fate (absorption, distribution, metabolism, and excretion) of drugs in animals and man. References are provided to papers that deal with the pharmacologic, biochemical, and clinical aspects of the subject. Each volume is divided into three parts: (1) A numbered list of references; (2) An analytic table arranged alphabetically by drug name; and (3) An empiric formula table giving the chemical names of the substances represented by the formulas. In the tables in Section 2, the contents of each paper are briefly analyzed, making use of key words such as absorption, distribution, excretion, dosage form, man, animal, synthesis, and so on. Also, the date of publication and the number of references included with each article are given. Each volume of the series contains 3000 references, numbered from Volume 1. Because each reference may refer to several different drugs, the total number of entries in the analytic table in each volume is about 4000. About 2000 different drugs are considered. A list of journals analyzed has been included (about 70 titles).

The subject matter of the series is important, and the work is unique. The first English language volume of the series appeared in 1974; however, Volume 1 had previously been published in French in 1970 under the title *Les Sort des Medicaments dans l'Organisme*.

14. Fenichel, Carol Hansen, ed. **Pharmaceutical Information.** Philadelphia, PA: Drexel University, 1982. 105p. bibliog. (*Drexel Library Quarterly*, Vol. 18, No. 2, Spring 1982). \$6.00pa. LC 65-9911. ISSN 0012-6160.

This issue of a library periodical is intended to acquaint readers with the diversity of drug information services. The editor believes these services can be divided into two groups: (1) those managed by librarians, mainly libraries in health sciences professional schools, hospitals, and pharmaceutical firms, and (2) those managed by health professionals, usually pharmacists. The latter include primarily poison control centers and drug information centers. The editor further feels that there could be better understanding between these two groups.

The following articles are included: (1) The many faces of drug information; (2) Providing drug information to health professionals and consumers: role and responsibility of the pharmaceutical manufacturer; (3) Poison control centers; (4) The hospital-based drug information center; (5) Referral as an integral part of a health sciences reference service; (6) Foreign drug information; (7) Online retrieval of pharmaceutical information; and (8) Chemical substructure searching—industrial applications and commercial systems.

The papers are thoughtful, and a good many useful publications are listed or described. Reference use of the publication is limited, however, because there is no index.

15. Glunz, Diane, ed. **A Guide to Drug Information and Literature: An Annotated Bibliography**. 2nd ed. Los Angeles, CA: Public Services Section, Norris Medical Library, University of Southern California, 1982. 33p. \$8.00.

No introductory text material or index have been included in this brief publication. It was evidently intended primarily for use by patrons of the Norris Medical Library because the call numbers of the books and their location in the library are indicated. The 58 annotated publications listed are divided among the following sections: (1) Drug names; (2) General drug information; (3) Evaluative and comparative sources; (4) Therapeutics; (5) Toxicology, adverse reactions, and interactions; (6) Indexes and abstracts; (7) Textbooks; and (8) Laws, regulations, and news.

Each annotation provides the following information about the publication reviewed: scope, arrangement, contents, and use.

16. Hall, Virginia B., and Sharon W. Schwerzel, comps. **Index to Sources of Data and Statistics in Pharmacy and the Health Care Field**. Washington, DC: American Pharmaceutical Association, 1981. 58p. index. \$18.00.

Intended primarily for health professionals and libraries, particularly those in the pharmaceutical field, this booklet contains references to about 300 publications that are sources of statistical information. The publications listed include journal articles, government documents, surveys, and reports, virtually all published since 1976.

There are two main parts, "Pharmacy" and "Health Care." Part 1 is broken down into sections as follows: (1) Drug products; (2) Health and beauty aids; (3) Distribution centers; (4) Pharmaceutical industry; (5) Pharmacists; and (6) Education. The sections in Part 2 include: (1) Manpower; (2) Education; and (3) Facilities.

17. Kalant, Oriana Josseau, Kevin O'Brien Fehr, Diana Arras, and Lise Anglin. **Cannabis: Health Risks: A Comprehensive Annotated Bibliography (1844-1982)**. Toronto, Ontario, Canada: Addiction Research Foundation, 1983. 1100p. index. (Bibliographic Series, No. 16). \$40.00pa. ISBN 0-88868-081-3.

There was a big surge in the literature on marijuana in the mid-1960s, which reached its peak in the mid-1970s. This volume, however, contains references on the subject covering the years 1844-1982. Listed are 1719 articles dealing with the adverse effects of cannabis. The annotations are fully descriptive but nonevaluative. It is presumed that the reader will make his own judgments on the merits of each paper. Also included in the volume is a five-and-one-half page selected list of book-length works on cannabis. The bibliography is arranged alphabetically by the first author's name; other authors' names are included in an author index. A subject index has been provided.

The primary intended audience for this imposing volume is the research worker, but it is an important work for others to be aware of.

18. Londos, Eutychia G. **Compendium of Current Source Materials for Drugs**. Metuchen, NJ: Scarecrow, 1982. 140p. index. \$12.50pa. LC 81-21376. ISBN 0-8108-1507-9.

Intended for librarians, health professionals, and laypersons, this annotated bibliography lists approximately 400 sources of information about drugs. Most aspects

of drugs are covered, of necessity quite selectively, with the emphasis on drug abuse. A variety of types of material are included, even some textbooks.

Twelve sections are presented: (1) General information sources; (2) Dictionaries and encyclopedias; (3) Books and pamphlets and general reading; (4) Evaluative and comparative sources; (5) Laws, regulations, and criminal justice and selected reading; (6) Bibliographies; (7) Directories of education information and treatment centers; (8) Education, information, and treatment centers (a list of agencies); (9) Journals and newsletters; (10) Reports; (11) Audiovisual catalogs and indexes; and (12) Computer/online databases. About a third of the titles listed include more than one type of source material, and consequently they have been cross-referenced to other sections to facilitate locating each type of material more completely.

The most unusual feature of the work, and perhaps a weakness of it, is that the materials listed are so diverse in subject content that they often bear only a slight resemblance to each other. For example, in the section on evaluative and comparative sources, there are books on vitamin C, opiate dependence, monitoring drug therapy in long-term care facilities, suspected carcinogens, and side effects of drugs.

On the positive side, the annotations are informative and the chapters on audiovisuals and online databases are welcome.

19. Menditto, Joseph. **Drugs of Addiction and Non-Addiction, Their Use and Abuse: A Comprehensive Bibliography, 1960-1969.** Troy, NY: Whitson Publishing, 1970. 315p. index. \$11.50. LC 79-116588. ISBN 0-87875-003-7. *Drug Abuse Bibliography for 1970- .* Supplementary volumes. Compilers vary.

This bibliography of about 6000 entries is a comprehensive guide to materials in the field of addiction. It includes citations to books and essays, doctoral dissertations, and periodical literature, the latter being divided into "general" and "scientific" categories. References are arranged under the following headings: amphetamines and stimulants, barbiturates and tranquilizing drugs, lysergic acid diethylamide, marijuana, narcotic addiction, narcotic rehabilitation, narcotic trade, narcotics, narcotic control, narcotic laws and legislation, narcotics and crime, and narcotics bibliography.

Supplementary volumes to the work have been published approximately annually since 1970, under the title *Drug Abuse Bibliography for (date)*. The compilers have included Jean C. Advena, Charles W. Triche, Diane S. Triche, Elizabeth Goode, and Polly T. Goode. The books make up a near-complete bibliography of the world literature on the subject for the period covered.

The arrangement of the materials has varied a little from year to year. The latest supplement is divided into four sections: (1) Books, monographs, and pamphlets; (2) Title index to periodical literature; (3) Subject index to periodical literature; and (4) Author index. The first section is arranged alphabetically according to author, when given. Entries in the periodical subject index are arranged alphabetically by title under each subject heading. A list of journals cited and a list of subject headings used in the bibliography are included in the preliminary pages.

A limitation of the work is that only senior authors of the publications are named in the entries and included in the author index.

These volumes are probably of most value to the research audience. However, popular materials are also included.

20. Neu, John, ed. **Chemical, Medical and Pharmaceutical Books Printed Before 1800 in the Collections of the University of Wisconsin Libraries.** Compiled by Samuel

Ives, Reese Jenkins, and John Neu. Madison and Milwaukee, WI: University of Wisconsin Press, 1965. 280p. \$22.00. LC 65-24186. ISBN 0-299-03680-4.

This bibliography covering the history of pharmacy was edited and compiled primarily by a history of sciences librarian, John Neu, who began the work after the University of Wisconsin acquired the Denis I. Duveen Collection in chemistry and alchemy about 1951. The University also had acquired valuable gifts of other private collections such as that of Frederick Belding Power, the first head of the School of Pharmacy, and Edward Kremers, a noted pharmacy historian. In addition, more recent noted professors at Wisconsin such as George Urdang and Glenn Sonnedeker of pharmacy, Aaron J. Ihde of chemistry, and Erwin Ackerknecht of medicine contributed by directing purchases of materials, making the University of Wisconsin Libraries the most outstanding in the history of pharmacy area.

This bibliography lists alphabetically 4442 items with the main entry under the personal or corporate author in the form usually used in libraries.

21. Pasztor, Magda, and Jenny Hopkins, comps. **Bibliography of Pharmaceutical Reference Literature**. London, England: Pharmaceutical Press; New York: International Publications Service, 1968. 167p. bibliog. index. \$5.00pa. LC 68-140058. ISBN 0-85369-055-3.

The aim of the compilers of this bibliography was to provide a selective annotated list of publications used for reference in all areas of pharmacy. Most of the materials were published from 1960 through early 1968. Periodicals and textbooks have not been included, and the bibliography is limited largely to English language materials.

There are ten main sections arranged by type of material as follows: (1) Drug information sources; (2) Abstracting and indexing services; (3) Lists of periodicals; (4) Bibliographies and booklists; (5) Guides to literature; (6) Encyclopedic works, handbooks, and dictionaries; (7) Review publications; (8) Directories and yearbooks; (9) Scientific writing, nomenclature, and abbreviations; and (10) Language dictionaries and translations. Each section is subdivided by subject such as general, pharmacy, chemistry, or biologic sciences. Each main section is introduced by a short essay giving brief definitions and describing the arrangement within it. The final chapter is a world list of associations, and a list of schools of pharmacy in the United Kingdom has been appended.

The bibliography is well done and useful when its age is taken into account.

22. Piermatti, Patricia A., Barbara M. Hill, and Bonnie Snow, eds. **A Basic Booklist for Pharmaceutical Education**. Bethesda, MD: American Association of Colleges of Pharmacy, 1983. 127p. index. \$10.00.

Many health science disciplines have established basic book lists, and this one is intended to complement other well-known ones. It is "a selective bibliography of books and reference works to support professional education in pharmacy and drug education. It is anticipated that it will be used not only by pharmacy school librarians and educators as an aid in bibliographic selection, but also by other medical, academic, and corporate libraries, as well as public libraries responding to the growing need for collection development to provide patient and consumer health information service." Forerunners of the list were published in various issues of the *American Journal of Pharmaceutical Education* from 1955 to 1969 (see entry 723).

The computer-produced list of 791 titles was developed making use of questionnaires sent to pharmacy school faculty members and by input from pharmacy school librarians. Arrangement is alphabetical by author under 30 subject categories.

12 / Part I—Reference Sources

The citations include author(s), title, publisher, place, date, and price. There are no annotations. Asterisks are used to indicate that certain titles are especially recommended for a basic collection. Although the pharmaceutical field is covered broadly, with ancillary areas such as chemistry, biochemistry, cosmetics, drug abuse, nuclear medicine, and health care covered, emphasis is on clinical pharmacy.

Titles included are for the most part well selected, and the list can serve its intended purpose well.

23. Revill, J. P., ed. **Drug Information Sources: A World-Wide Annotated Survey**. 2nd ed. Henley-on-Thames, Oxon, England: Gothard House Publications Ltd., 1984. 147p. £21.80.

This guide was compiled to assist those interested in basic source material related to prescription pharmaceutical products on a worldwide basis. It lists, with brief annotations, for each region or country, drug compendia, price lists, handbooks, journals, and other publications relating to pharmaceuticals. Also listed are leading professional and trade organizations of the field. The entries are grouped under three headings: international, regional, and country sources. An appendix identifies company codes.

Because there are relatively few publications included in this short work, its usefulness is limited.

24. Ruben, Douglas H. **Drug Abuse and the Elderly: An Annotated Bibliography**. Metuchen, NJ: Scarecrow, 1984. 247p. index. \$20.00 LC 83-20463. ISBN 0-8108-1677-6.

The compiler of this work, a clinical psychologist, considers drug abuse among the elderly a serious problem of the 1980s, one that has not received enough attention. Interest in it is growing, however, and a body of literature has accumulated.

After an introductory chapter about the problem, the book presents an annotated list of publications that were published over a long period of time, some as early as 1932, up to the present. The greatest number, however, are from 1960 to date. Included are 787 articles, books, research documents, and convention papers. The entries are arranged under the following headings: (1) Alcohol use and abuse; (2) Illegal and legal drugs: use and abuse; (3) Medication: uses, abuse, and compliance; (4) Epidemiology: psychosocial and economic factors; (5) Epidemiology: public policy factors; (6) Epidemiology: mental health and geriatrics; (7) Drugs and alcohol: education and prevention; and (8) Institutionalization and drug abuse. There are journal, author, and subject indexes.

The compiler has defined the "elderly" rather broadly: "all individuals over the age of 60, but not excluding middle-aged adults over 55 years." He also has defined drug abuse broadly. Many of the publications included are primarily about other subjects. The book is especially suitable for psychologists, gerontologists, and other professionals in the health care field.

25. Sewell, Winifred. **Guide to Drug Information**. Hamilton, IL: Drug Intelligence Publications, 1976. 218p. bibliog. index. \$12.00. LC 75-17156. ISBN 0-914768-21-2.

Although this excellent book is intended primarily for pharmacists, other health professionals, and students in these fields, it is also of value to pharmaceutical and medical librarians to guide them in the use of the literature on drug information. The book is not merely a bibliography; it is also a bibliographic essay that is intended to be read. The index allows it to be used effectively as a ready reference tool, however. The

materials included are well selected, the comments are excellent, and much practical information can be found. The work is suitable for use as a textbook for courses concerned with drug information, and virtually all the titles listed are essential for pharmacy libraries.

The work is in four parts. Part 1 deals with books that list drugs. Tables have been supplied that compare the various features of the drug information sources. Part 2 lists and describes treatises, periodicals, other primary sources, and reference works. Part 3 discusses resources such as index and abstract publications, card and microfiche files, reviews and encyclopedic treatises, computer searches, and network services. Part 4 is a look into the future with suggestions on how to make the best use of the new information-handling technology.

Although it is an older work, the guide is still recommended for all who are involved with drug information. A revised edition is said to be in progress.

26. Simon, James E., Alena F. Chadwick, and Lyle E. Craker. **Herbs: An Indexed Bibliography 1971-1980: The Scientific Literature on Selected Herbs and Aromatic and Medicinal Plants of the Temperate Zone.** Hamden, CT: Archon, Books/Shoe String Press, 1984. 770p. index. \$69.50. LC 82-24493. ISBN 0-208-01990-1.

The compilers of this extensive bibliography felt that there was a serious gap in the herb literature useful to the scientist. The idea of preparing a bibliographic work on the major commercially significant herbs of the temperate zone was conceived by the first author several years ago while he was studying the adaptation of herbs to marginal land in Israel. The book is intended primarily for professional horticulturists, chemists, food scientists, pharmacologists, and pharmacognosists.

The compilation is in three main parts. The first part lists 63 common herbs with the following information provided: common name; scientific name; family; French, German, Italian, and Spanish names; a description about a page in length stressing commercial production; and bibliographic references that refer to the citations in Section 2.

The second section lists periodical references under these headings: chemistry, botany, bionomics, horticulture, production ecology, culinary studies, pharmacology, perfumery, natural dyes and ornamental applications, and commerce. The materials under the main headings are further subdivided.

Part 3, "Other References," lists the following: books on herbs, bibliographies on herbs; reports, conferences and symposia; and general references.

The compendium contains nearly 8000 citations, most from scientific journals, but about 200 of the references are to books. There are no annotations. Some foreign literature is included with titles translated and an indication of the language of the material given.

The number of herbs chosen for inclusion could be more than twice as great; only the most common are treated. However, the work seems to be quite comprehensive within the intended scope and very painstakingly prepared. It should prove particularly valuable to the research scientist or the person with a commercial interest in herbal plants.

27. U.S. Bureau of Narcotics and Dangerous Drugs. Office of Scientific Support. Drug Control Division. **Drug Information Sources: A Survey of Selected Drug-Related Repositories and Information Sources.** By Moshe Mangad, Elizabeth Fong, and Susan Reed. Washington, DC: Government Printing Office, 1972. 101p. bibliog. (SCID-TR-6).

The brief descriptions in this publication are of information sources available to the Bureau of Narcotics and Dangerous Drugs that offer drug-related data. These sources are classified by type of organization and by type of service rendered. The former group is subdivided by government agencies, nongovernment information services, other information services, and libraries. The latter group includes publications and literature searching services such as computer databases, indexing and abstracting services, card services, and so on. Also included is a section entitled "Highlights and Evaluations of Literature Searching Services." The information services are competently described.

The coverage of this publication is quite broad, including a list of sources that give information about all drugs, not just those commonly abused. Although some of the material included in the document is out of date at this writing, it is still a valuable compilation.

28. University of Wisconsin, Madison. Power Pharmaceutical Library. **Catalog of the F. B. Power Pharmaceutical Library, School of Pharmacy, University of Wisconsin.** Boston, MA: G. K. Hall, 1976. 4 vols. \$225.00 ISBN 0-8161-0021-7.

The catalog of the Pharmaceutical Library at the University of Wisconsin is especially valuable because the library contains a fine collection of historical materials. The first two volumes of this work are an author and title catalog; Volumes 3 and 4 are subject volumes. The format in which the material is presented is a copy of the library's catalog cards, reduced in size to allow 21 entries to be printed on a page. Both parts of the work are alphabetically arranged and include numerous cross-references. Some of the materials listed are not housed in the University of Wisconsin Pharmaceutical Library, but may be in the University's main library, the Center for Research Libraries in Chicago, or some other special collection at the University.

29. Upjohn Company. **The Prostaglandin Bibliography.** Philadelphia, PA: Medical Documentation Service, 1974-. 1 vol. (looseleaf) with annual supplements. index. About \$45.00 per volume.

The Upjohn Company began distributing this bibliography in 1966. The first computer-printed edition appeared in 1974, and it contained all the entries listed in prior editions plus current articles. Annual supplements have been printed since 1974. Early volumes were published by Upjohn, but since 1979 the Medical Documentation Service of the College of Physicians in Philadelphia has been the publisher.

The lists are arranged alphabetically by author. Up through 1983 more than 22,000 citations had been listed.

30. Waller, Coy W., Jacqueline J. Johnson, Judy Buelke, and Carlton E. Turner. **Marihuana: An Annotated Bibliography.** New York: Macmillan Information, a division of Macmillan Publishing, 1976. 560p. index. \$14.95. LC 76-20635.

This extensive bibliography is intended for those interested in the technical literature on marijuana. There are 3045 entries covering international scientific publications since 1964. The compilers state that by using this publication and an earlier one (*The Question of Cannabis, Cannabis Bibliography*, United Nations Commission on Narcotic Drugs, E/CN.7/479, 1965, edited by Nathan B. Eddy), the literature through 1974 can be surveyed comprehensively.

In addition to the bibliography, the book contains introductory material on the chemical structure of the natural cannabinoids and the metabolites and a summary table of biologic actions of marijuana in various laboratory animals.

The bibliography and the brief annotations make up the bulk of the work. Arrangement is alphabetical by senior author.

To keep the work up to date, several supplements have been published by the Research Institute of Pharmaceutical Sciences, School of Pharmacy, University of Mississippi, where an extensive research program is being carried out that involves all of the published research that has been done on marijuana worldwide. This is an impressive work.

31. Wexler, Philip. **Information Resources in Toxicology**. New York: Elsevier/North-Holland, 1982. 333p. index. \$50.00 LC 81-9734. ISBN 0-444-00616-8.

There is no other guide of this kind in the field of toxicology. It covers the major sources of information with annotations and also includes some that may not necessarily be of reference value but may be representative of a subject or format. The broad area of toxicology is covered, as are more specific areas, albeit rather selectively.

Wexler considers the following areas to be within the scope of toxicology: industrial and household chemicals and substances, food, drugs, cosmetics, gases, radiation and radioactive substances, sound, heat, light, laser, microwave, metals, minerals, trace elements, biotoxins (mushrooms, plants, insect stings, snake and marine life venoms), environmental pollutants, pesticides, industrial hygiene and occupational medicine, analytic techniques, chemical and forensic toxicology, epidemiology, contamination of water and air, carcinogenesis, mutagenesis, teratogenesis and reproductive toxicology, behavioral toxicology, toxicity testing, legislation, regulations, societal issues, veterinary toxicology, and target systems toxicology.

The work is in seven parts: (1) Reference sources; (2) Organizations; (3) Legislation and regulations; (4) International activities; (5) Education (universities offering graduate programs in toxicology); (6) Information handling; and (7) Journal articles. There are three appendices: (1) Directory of poison control centers; (2) List of selected abbreviations; and (3) Addendum: additional reference sources.

The work is of high quality.

2 Abstracting and Indexing Services

Titles listed in this section are limited to those that are closely related to the pharmaceutical sciences. Many others are quite valuable to workers in the pharmaceutical field, however, although they are concerned with ancillary fields rather than pharmacy or are general. Such titles include *Chemical Abstracts*, *Biological Abstracts*, *Index Medicus*, *Excerpta Medica* abstract journals other than those listed, *Science Citation Index*, *Analytical Abstracts*, *Hospital Literature Index*, and *Dissertation Abstracts International, Section B: Sciences and Engineering*.

Many of the publications listed below and those named above are available for searching via the computer as well as through hard copy. Relevant computerized databases are described in the last section of this book.

A few miscellaneous publications, not the traditional index or abstract journal, are also listed below. These include Fukushima's two *Index Guides* and the *Substance Abuse Book Review Index* (entries 40, 41, and 51).

Included are several titles no longer published but still of at least historical value. These are *The Lynn Index*, two *Pharmaceutical Abstracts* titles, and *Pharmacognosy Titles* (entries 44, 46, 47, and 49).

From 1948, when the American Pharmaceutical Association's *Pharmaceutical Abstracts* (entry 46) was discontinued, until 1964, when *International Pharmaceutical Abstracts* (entry 42) was initiated, there was no major indexing or abstracting tool for the pharmaceutical sciences. It has been presumed that *Chemical Abstracts*, at least to some extent, filled that gap in indexing.

32. **BioResearch Today: Addiction.** Philadelphia, PA: BioSciences Information Service, 1972-. Monthly. \$75.00. ISSN 0149-1008.

This title is one of a group of special abstract journals that cover specific research topics and are subsets of abstracts appearing in *Biological Abstracts*. Each monthly issue contains 100-250 abstracts. The scope of coverage includes studies on chemicals and medicinals that have addictive traits (such as alcohol, tobacco, opiates, hallucinogenic agents, and so on). Papers covering extraction, quantitation, metabolism, mechanisms of action, psycho- and neuropharmacologic aspects, psychiatric effects, toxicity, and other environmental facts are abstracted. The publication is of particular value for keeping the researcher up to date in his field.

33. **Bulletin Signaletique: Part 330: Sciences Pharmacologiques, Toxicologie.** Paris, France: Centre National de la Recherche Scientifique, Centre de Documentation Scientifique et Technique, 1961-. Monthly. ISSN 0007-5442.

This comprehensive abstract journal is one of many sections of the *Bulletin Signaletique*, which covers all fields of science and technology. Formerly this section was known as *Bulletin Signaletique, Part 13: Sciences Pharmacologiques, Toxicologie*. All titles of articles not listed in French are translated into French with the original language of the article indicated. Abstracts are provided.

34. **Core Journals in Clinical Pharmacology.** Amsterdam, The Netherlands: Elsevier Science Publishers, 1983-. 11 times per year. \$100.00. ISSN 0167-8965.

Prepared from the Excerpta Medica database (see entry 687), this publication provides fast current-awareness abstracting of key international literature that is of special interest to the busy clinician. It is basically a monthly overview of significant clinical studies. The abstracts appear four to six weeks after receipt of the journals. About twelve "core" journals are covered, and there is also a survey of items related to clinical pharmacology from five general medical journals included in a special column.

35. **Excerpta Medica, Section 30: Pharmacology.** Amsterdam, The Netherlands: Excerpta Medica Foundation, vol. 57, 1983-. 20 times per year. \$323.00. ISSN 00014-4247.

This section of Excerpta Medica's abstracting service is intended for experimental and clinical pharmacologists and clinical pharmacists in hospitals, industry, universities, and general practice. Previously this section covered both pharmacology and toxicology, but because of the growth in both areas, toxicology is covered in a newer section, Section 52 (see entry 39).

The individual issues start with an introductory chapter dealing with general problems such as pharmacokinetics, drug receptor interactions, bioassays, and metabolism. Then several chapters are devoted to drugs affecting particular organs or systems or to drugs with a specific action. Other chapters cover such topics as diagnostic agents, disinfectants, immunologic agents, anticancer agents, drug vehicles, and additives.

The entire Excerpta Medica database may be searched online (see entry 687).

36. **Excerpta Medica, Section 37: Drug Literature Index.** Amsterdam, The Netherlands: Excerpta Medica Foundation, vol. 12, 1980-. 24 times per year. \$3120.00. ISSN 0376-5091.

Formerly called the *Drug Literature Index*, this section of the Excerpta Medica abstracting service is not included in the "full set" subscription to the publications. The

aim of this section is to provide a comprehensive and up-to-date bibliographic tool that can be used to find information on the effects of all drugs and potential drugs reported in the primary biomedical and chemical literature worldwide. The publisher claims that each year approximately 400,000 articles appearing in over 3200 serials are scanned by their specialists. Over the past few years an average of 65,000 references have been published annually in the *Drug Literature Index*. The intended audience includes clinical and experimental pharmacologists in research, industry, and practice; pharmacists; endocrinologists; and organic chemists.

Citations (including those of original papers, preliminary communications, reviews, editorials, and letters to the editor) are selected for the index if they contain significant information on the following: the effects of drugs, related compounds, and naturally occurring substances on biologic substrates; clinical studies on drug action; pharmacokinetic studies; structural analysis, synthesis, and methods of determination of drugs and potential drugs; and substances the chemical structural formulas of which indicate that they may have an influence on a biologic substrate.

The entire Excerpta Medica database is available for online searching through several international vendors (see entry 687).

37. Excerpta Medica, Section 38: Adverse Reactions Titles. Amsterdam, The Netherlands: Excerpta Medica Foundation, 1966-. 12 times per year. \$2798.00. ISSN 0001-8848.

This section of the Excerpta Medica abstracting service is not included as part of the "full set" subscription; it must be subscribed to separately. The publisher claims that each year an average of 100,000 articles dealing with drugs are included in the Excerpta Medica database, called EMBASE, of which an average of about 6000 articles fall within the scope of *Adverse Reactions Titles*. Citations from a number of communications (including original papers, preliminary communications, reviews, editorials, and letters to the editor) are included if they contain significant information on such topics as the complications, side effects, and adverse reactions produced by drugs; experimental teratology; suicide; drug abuse; and accidental overdosage.

The intended audience includes clinical pharmacologists in research, industry, and practice; pharmacologic toxicologists; and physicians in general practice.

The entire Excerpta Medica database is available for online searching via several international database vendors (see entry 687).

38. Excerpta Medica, Section 40: Drug Dependence. Amsterdam, The Netherlands: Excerpta Medica Foundation, 1973-. 10 times per year. \$182.00. ISSN 0304-4041.

This publication is one of about 65 sections of the Excerpta Medica abstract journals. It indexes and abstracts international literature pertaining to the nonmedical use of drugs, covering more than 5000 journals.

The issues start with an introductory chapter on general aspects of drug dependence. A second chapter provides abstracts of general papers on individual drugs, classified on a pharmacologic basis, such as narcotics, depressants, and so on. The remaining information is arranged in separate chapters on such topics as individual response to drugs (in both man and animals), diagnosis of drug dependence, treatment, rehabilitation, epidemiology, and sociocultural, legal, and economic aspects and prevention.

The entire Excerpta Medica database is available for online searching (see entry 687).

39. **Excerpta Medica, Section 52: Toxicology.** Amsterdam, The Netherlands: Excerpta Medica Foundation, 1983-. 20 times per year. \$323.00. ISSN 0167-8353.

This is a new section of the Excerpta Medica abstract service. The material presented in it was formerly included in Section 30, now restricted to the field of pharmacology. The audience addressed includes experimental, clinical, and industrial toxicologists.

After an introductory chapter in each issue, a number of chapters are presented covering such areas as food additives and contaminants, cosmetics and toiletries, agrochemicals, industrial chemicals, radiation, and radioactive materials. Subsequent chapters cover toxic interactions, mutagenesis, target organ toxicology, predictive toxicology, epidemiology, toxicologic methods, and laboratory hazards. The printed abstracts frequently serve as an alerting service.

The entire Excerpta Medica database is available for online searching (see entry 687).

40. Fukushima, Hiroyuki, Toshiro Okazaki, and Michiko Noguchi. **Index Guide to Drug Information Retrieval.** New York: Elsevier/North-Holland, 1979. 280p. \$64.50. ISBN 0-444-80139-1.

This publication of 1626 entries is a combined index to eight drug information sources: *Martindale: The Extra Pharmacopoeia*, *The Merck Index*, *Miller's Drug Effects in Hospitalized Patients*, *The Physicians' Desk Reference*, *Ryan's Handbook of Practical Pharmacology*, *Gahart's Intravenous Medications*, *Trissel's Handbook of Injectable Drugs*, and *Meyler's Side Effects of Drugs* (see entries 105, 154, 281, 335, 353, and 386).

The material is presented in the form of an alphabetical index of drug names with cross-references from synonymous names. The references to the source volumes are made in abbreviated code form.

The volume is useful within certain limits. For the most part, the source volumes referred to have now been superseded by later editions. No information is provided directly about the drug listed; one must look in a source volume. However, because health professionals are frequently obliged to look in several drug compendia to get all the information they seek, the book can serve as a handy index to several sources.

41. Fukushima, Hiroyuki, Toshiro Okazaki, and Michiko Noguchi. **Index Guide to Rational Drug Therapy.** Amsterdam, The Netherlands: Excerpta Medica; distr., New York: Elsevier/North-Holland, 1982. 387p. index. \$76.75. ISBN 0-444-90273-2.

Said to be a companion to the authors' *Index Guide to Drug Information Retrieval* (see entry 40), this volume makes it possible, it is claimed, for physicians to make informed decisions regarding drug therapy, even when the patient has complicated symptoms. Main characteristics of the guide are: (1) from the name of a disease and its symptoms, information can be retrieved on the drugs necessary for rational therapy; (2) from the name of a drug-induced disease, information is available on the drugs probably causing the condition; and (3) from the drug names, relevant original articles and abstracts can be retrieved from twelve source publications containing drug information.

The volume is arranged in four parts: (1) Classification of drugs according to indications (e.g., allergic disorders); (2) Classification of drug effects (e.g., gastrointestinal agents); (3) Main index of drugs; and (4) Classification of drugs according to side effects. Included is an index to diseases and symptoms with page references to terms listed in Parts 1 and 4.

The Main Index of Drugs provides access to a great deal of information on the 583 drugs selected for coverage. The names are arranged alphabetically with 976 synonyms (generic name, abbreviations, drug code number, trade name), and cross-references are provided. Little information is given directly; instead, references are provided to information in these twelve basic sources: *Side Effects of Drugs Annual*; *Year Book of Drug Therapy*; *Martindale: The Extra Pharmacopoeia*; *AMA Drug Evaluations*; *Physician's Desk Reference*; *Meyler's Side Effects of Drugs*; Goodman and Gilman's *The Pharmacological Basis of Therapeutics*; *Clin-Alert*; *The Medical Letter on Drugs and Therapeutics*; *Year Book of Medicine*; and *Year Book of Family Practice* (see entries 80, 82, 105, 247, 335, 386, 587, 760, and 872). The references are arranged under such headings as general, action and uses, dosage and administration, absorption and fate, precautions, toxic effects, and treatment of toxic effects.

The work successfully condenses much valuable information. The sources are important ones usually found in medical and pharmaceutical libraries, although newer editions are available in many cases.

42. International Pharmaceutical Abstracts. Bethesda, MD: American Society of Hospital Pharmacists, 1964-. Semimonthly. \$300.00. ISSN 0020-8264.

The leading index-abstract publication for the pharmaceutical sciences, this journal covers about 700 pharmacy, medical, and health-related publications from throughout the world. About 12,000 abstracts are published each year, prepared by contributing editors who are practitioners, scientists, and educators.

The abstracts are arranged in 25 subject sections (such as adverse drug reactions, toxicity, drug analysis, pharmacy practice, and so on). Each abstract is a paragraph or two in length. Each issue includes an author and subject index and cross-references. Indexes are cumulated twice a year, and some multi-year cumulations are available.

Some supporting publications have been made available such as *IPA User's Guide* and *Thesaurus of Subject Terms and Cross References to International Pharmaceutical Abstracts*. In addition to the printed version, *International Pharmaceutical Abstracts* is also available as an online database, in microfiche, and on magnetic tape (see entry 692).

Several special subject spinoff publications have been issued.

43. International Pharmaceutical Technology and Product Manufacture Abstracts. London, England: Childwall University Press, 1983-. Quarterly. \$168.00 ISSN 0264-2247.

A bibliographic and information tool intended mainly for the drug industry, this abstract journal brings the attention of the technical community to advances made in the field of pharmaceutical technology and product manufacture. It abstracts publications on the many aspects of the pharmaceutical sciences, including methods for the isolation of active raw materials; the analysis of drugs; impurities and degradation products; the characteristics of drugs; dosage form design and process development; process mechanisms and process control; plant design and product manufacture; packaging; regulatory affairs; quality assurance and stability evaluation; and good manufacturing practices.

Each issue of the publication abstracts journal publications, reports, books, and conference papers.

44. Lynn, Eldin V. The Lynn Index: A Bibliography of Phytochemistry. (Editors and publishers vary). Vol. 1. Boston, MA: Massachusetts College of Pharmacy, 1957-.

Dr. Lynn worked for many years at the Massachusetts College of Pharmacy compiling the "Lynn File," which was an extensive bibliography of phytochemistry on slips of paper. Over a period of some years the material was published, a part at a time, edited and organized by other individuals, and published by other schools of pharmacy with the support of a pharmaceutical company.

Each monograph published is concerned with a single plant family or a group of related families. Included are botanical descriptions, constituents, and the bibliography.

No new parts of the series have been published recently.

45. Medicinal and Aromatic Plants Abstracts. New Delhi, India: Publications and Information Directorate (CSIR, Hillside Road, New Delhi 110012, India), 1979-. Bimonthly.

This rather new abstracting journal reports on world literature in the field of medicinal and aromatic plants. Its aim is to cull from important journals the highlights of current research in the field. The advisory committee is made up of scientists from various countries, although most are from India. More than 250 journals were reportedly scanned for pertinent material. Each issue contains a list of journals abstracted; many are Indian in origin.

The abstracts included are short, usually about a paragraph. The entries are grouped by specific subject. Each issue contains a keyword subject index, and annual indexes include authors' names also.

A special bibliography on a subject of current interest is included in each issue. The special bibliographies have references without abstracts. The journal is valuable because there is no other publication that currently serves the same purpose.

46. Pharmaceutical Abstracts. (American Pharmaceutical Association). Washington, DC: American Pharmaceutical Association, 1935-1948. Monthly.

These abstracts were issued with the *Journal of the American Pharmaceutical Association, Scientific Edition*. Previous to 1935, the abstracts were published in the Association's *Yearbook* as a report on the progress of pharmacy.

The abstracts are of good quality and well indexed. Arrangement is by subject area; there are section headings such as modern remedies, bacteriology, chemistry, pharmacognosy, pharmacology, toxicology, and therapeutics. The publication was discontinued because it was felt that the subject matter was covered in *Chemical Abstracts*.

47. Pharmaceutical Abstracts. (University of Texas). Austin, TX: University of Texas College of Pharmacy, 1957-1969. Irregular.

This informal abstract publication continued another called *Unpublished Abstracts of Articles on Pharmaceutical Subjects*. The title varied slightly.

The compilers of these abstracts felt that a gap in the bibliography of pharmacy existed after *Pharmaceutical Abstracts* (published by the American Pharmaceutical Association) (see entry 46) was discontinued in 1948, although some felt that *Chemical Abstracts* gave sufficient coverage. One of the original compilers, Henry M. Burlage, was a *Chemical Abstracts* abstractor, and many of his abstracts were rejected for publication in *Chemical Abstracts* because they lacked sufficient chemical interest or content. Therefore, this publication was initiated to see if there was interest in reviving a pharmacy abstract publication.

The publication provides some coverage for a limited period. Author and subject indexes are provided. Later issues contain some book titles and reviews. At intervals an additional bibliography of articles in the area of pharmaceutical administration is included.

There was little need for the publication after *International Pharmaceutical Abstracts* (see entry 42) was initiated in 1964.

48. Pharmaceutical News Index. Louisville, KY: Data Courier, 1976-. Monthly, looseleaf format. About \$400.00 per year.

Created primarily for the pharmaceutical industry, this indexing service provides access to news and developments in the pharmaceutical, medical devices, and cosmetics fields. It indexes a number of periodicals not indexed or not indexed comprehensively, including: *FDC Reports*, "The Pink Sheet"; *Drug Research Reports*, "The Blue Sheet"; *MDDI Reports*, "The Gray Sheet"; *Weekly Pharmacy Reports*, "The Green Sheet"; *Quality Control Reports*, "The Gold Sheet"; and *SCRIP World Pharmaceutical News* (see entries 801, 922, and 954).

The Index helps users find information such as company, drug, and government agency names; financial data; people in the industry; new research development; drugs and companies involved in specific marketing and production; current controversies and issues; industry mergers; and government regulations and guidelines. The Index can be searched online through a computerized database and through magnetic tape, as well as through the printed copy (see entry 699).

49. Pharmacognosy Titles. Chicago, IL: Department of Pharmacognosy and Pharmacology, College of Pharmacy, University of Illinois at the Medical Center, 1966-1974. Monthly.

Natural products are dealt with in this indexing journal, which, although no longer published, covers the world literature on the subject. About 100 leading journals were used directly to compile the work, with some other references being taken from *Chemical Abstracts* or *Biological Abstracts*. The publication was free to interested investigators or institutions.

Because pharmacognosy includes the study of all natural products of medicinal value, the journal included information about all living organisms, plants and animals. Articles discussed the detection, occurrence, distribution, isolation, and structure elucidation of substances from any living organism, including biologic activities of extracts and pure compounds. Indexing was done according to the genus and species of each organism mentioned in the articles. Arrangement was by chemical or biologic activity group. Abstracts were not included with the references.

50. Psychopharmacology Abstracts. Rockville, MD: U.S. National Clearinghouse for Mental Health Information, 1961-1982. Quarterly.

This publication is a specialized service designed to assist the National Institute of Mental Health in meeting its obligation of fostering and supporting laboratory and clinical research into the nature and causes of mental illness and methods of treatment and prevention. The publications abstracted assist investigators in the field of psychopharmacology in learning about new developments and research results. Because abused drugs are of the psychoactive type, much of the material included is of interest to those involved in research in this area. The abstracts are arranged in 17 categories so that the reader may focus readily on areas of individual interest. Subject and author

indexes appear in each issue, and cumulated ones are provided at the end of each volume.

Publication of the journal was discontinued in 1982.

51. **Substance Abuse Book Review Index.** By Jane Bemko. Toronto, Ontario, Canada: Addiction Research Foundation (33 Russell St., Toronto, Ontario, Canada M5S 2S1), 1980- . Annual. \$6.95.

Beginning with 1978 material, this publication has indexed reviews of books whose contents either wholly or partially deal with alcohol or drug abuse. About 315 journals are currently being scrutinized for reviews. The actual reviews are not included.

The approach to the reviews is by first author or editor. In the main section, the full citation of the book is given with the list of its reviews that have appeared that year. Recently reviewers' names have been listed also. There are indexes by all authors' or editors' names, titles, and subject. Journals covered are listed at the beginning of each volume.

The publication is of special value to librarians who are asked to find reviews of certain books for patrons and also for librarians who are considering purchasing a title. The title of a particular book may be repeated in a new issue of the index if there are additional reviews to report, but there is no duplication of listed reviews from year to year.

52. **Toxicology Abstracts.** Bethesda, MD: Cambridge Scientific Abstracts, 1978- . Monthly. \$404.00 ISSN 0140-5365.

This abstract publication focuses on in vivo toxic effects, covering over 4000 primary journals. The material is arranged under the headings pharmaceuticals; food additives; agrochemicals; cosmetics, toiletries, and household products; industrial chemicals; heavy metals; natural substances; miscellaneous; methods in toxicity testing; and reviews.

3 Reviews, Surveys, and Yearbooks

This section has been divided into two parts. Part A lists scientific reviews of research value, and Part B lists miscellaneous other reviews and surveys.

The scientific reviews and/or survey publications vary somewhat in type, subject and period coverage, and frequency. However, they have in common the fact that they are an effective means of bringing the reader up to date on topics of current interest, pointing out significant developments in a special field, and perhaps summarizing research. These publications almost always include extensive references to the literature.

The titles of these publications frequently include such words as "advances," "review," "report," "progress in," "methods," "annual review," "recent advances," and "yearbook," attesting to their intent.

Part B lists materials which are for the most part reviews and surveys that consider economic and social aspects of the pharmaceutical field.

Part A – Scientific

53. **Advances in Behavioral Pharmacology.** New York: Academic Press, 1977- . Published approximately every 2 years. About \$32.00 per volume. LC 74-10187.

Behavioral pharmacology is concerned with the behavioral action of drugs. This series is designed to provide in-depth analyses of critical issues in the field. The papers, written by experts, analyze rather than summarize research literature.

Topics covered include behavioral mechanisms of drug action, human behavioral pharmacology, drugs and agonistic behavior, and behavioral effects of certain abused drugs.

The series is of interest to psychologists, psychiatrists, and pharmacologists interested in drug effects on behavior and the central nervous system.

54. **Advances in Biochemical Psychopharmacology.** New York: Raven Press, 1969- . Approximately semiannual. \$40.00-\$50.00 per volume.

Each of the volumes in this series has an individual title, and they are usually compilations of symposium papers. The contributors are an impressive group. The volumes ordinarily contain a good deal of new and relevant information, but continuity among the papers is sometimes lacking, as is often the case with such publications.

Recent volumes have covered central nervous system receptors and benzodiazepine recognition site ligands.

55. **Advances in Drug Research.** New York: Academic Press, 1964- . Irregular. About \$45.00 per volume. LC 64-24672.

Most of these volumes are small, covering only four or five topics. They provide a medium for the presentation of significant progress to chemists, biochemists, and pharmacologists who are interested in the chemical and biologic aspects of drugs. The series provides comprehensive surveys in established areas of drug research and also in newer and sometimes narrower areas.

56. **Advances in Pharmaceutical Sciences.** Edited by H. S. Bean, A. H. Beckett, and J. C. Carless. New York: Academic Press, 1964- . Irregular; less frequently than annually. LC 64-21676. ISBN 0-12-032305-2 (vol. 5).

This serial publication concentrates on special areas of interest to the pharmaceutical scientist such as physical aspects of pharmaceuticals, pharmaceutical microbiology, and the influence of formulation on product stability and efficacy. The articles published appraise a subject rather than report mere facts.

57. **Advances in Pharmacology and Chemotherapy.** New York: Academic Press, 1962- . Annual. \$50.00.

These volumes contain independent review articles on various topics in the general area of pharmacology and chemotherapy. The individual chapters may appeal to somewhat different audiences: some to pharmacologists, some to medicinal chemists, and a few to clinicians. Written by outstanding researchers, they are generally of high quality, scientifically correct, and contain good bibliographies.

The volumes are valuable because as promising chemotherapeutic agents are developed, in-depth interpretation of research results and reliable design of experiments are needed.

58. **Advances in Pharmacotherapy.** Basel, Switzerland: S. Karger, 1982- . Irregular. \$72.00. ISSN 0253-2093.

The volumes of this series present pharmacologic material of importance in clinical medicine and patient care. Key findings from research groups are brought together for comparison and study. The first volume presented workshop papers on controlled-release nitroglycerin.

59. **The Alkaloids: A Review of the Literature.** Senior Reporter: M. F. Grundon. London, England: The Chemical Society, 1969-1983. 13 vols. Annual. (Specialist Periodical Reports). About \$55.00 per volume. ISSN 0305-9707.

Volume 13 is the final yearly review in this series; it is being replaced by a journal, *Natural Products Reports* (see entry 880). The whole area of alkaloid literature has been reviewed each year, with some classes excepted and reviewed less frequently. Biologic properties are not emphasized; the references included cover comprehensively the

isolation, structure, chemistry, synthesis, and biosynthesis of alkaloids. The material is divided into chapters by classic alkaloid classification.

The series has been highly regarded.

60. **Analytical Profiles of Drug Substances.** Edited by Klaus Florey. Vol. 1- . New York: Academic Press, 1972- . bibliog. index. Annual. \$45.00-\$50.00 per volume. LC 70-177259. ISBN 0-12-260811-9 (vol. 11).

This annual series is compiled under the auspices of the Pharmaceutical Analysis and Control Section of the American Pharmaceutical Association's Academy of Pharmaceutical Sciences. Its purpose is to supplement the official drug compendia, presenting material that is not in them. Each volume presents profiles of 16 or 17 drugs, and recently a new feature, profile supplements covering drugs treated in earlier volumes, has been added.

The monographs include the following information: description, physical properties, methods of synthesis, stability/degradation, methods of analysis, metabolism, biopharmaceutics, pharmacokinetics, toxicity, and references. Also included are figures of structures and spectra and tables of properties and chromatographic systems. A cumulative index is provided in Volume 11 (1982).

The volumes are valuable for those interested in pharmaceutical formulation and quality control and those needing information on drug metabolism, biopharmaceutics, and pharmacokinetics.

61. **Annual Reports in Medicinal Chemistry.** Sponsored by the Division of Medicinal Chemistry of the American Chemical Society. New York: Academic Press, 1965- . Annual. About \$32.00 per volume. LC 66-26843.

The contributors to these volumes present critical summaries of new and significant developments in the field of medicinal chemistry. About 30 chapters are included each year in a traditional format, which presents the material under these headings: (1) Central nervous system agents; (2) Pharmacodynamic agents; (3) Chemotherapeutic agents; (4) Metabolic diseases and endocrine function; (5) Topics in biology; and (6) Topics in chemistry and drug design. The 1984 volume added a new section that summarizes worldwide first-market introduction of therapeutic agents during the previous calendar year. Indexes by compound name and code number and by cumulative chapter title keywords are included in each volume.

The series is highly regarded.

62. **Annual Review of Chronopharmacology.** Oxford, England: Pergamon Press, 1985- . Annual. \$90.00. ISSN 0743-9539.

The focus of this publication is on biologic rhythms and medications in human beings, but it also takes into consideration many disciplines that contribute to the study of biologic rhythms on the one hand and to pharmacology on the other. Special attention is given to methodologic procedures and findings relating to biologic rhythms in the pharmacokinetics and pharmacodynamics of chemical agents and also to implications for improved design of drug delivery systems.

The publication will publish in each of its odd-numbered volumes the Proceedings of the Montreux Conferences of Biological Rhythms and Medications (held every 2 years). Even-numbered volumes are to consist of invited in-depth reviews and state-of-the-art articles.

63. **Annual Review of Pharmacology and Toxicology.** Palo Alto, CA: Annual Reviews, Inc., 1961- . Annual. \$27.00 per year. ISSN 0362-1642.

Originally called *Annual Review of Pharmacology*, this well-respected series presents scholarly review papers that are critical and appraise the status of the fields of pharmacology and toxicology. The publisher also publishes similar series in a number of other areas of science. The contributors are established researchers. The development of the fields of pharmacology and toxicology can be traced by a perusal of back volumes of the series, and one can ascertain by a study of current volumes what areas of the fields are now developing in importance and what research advances are being made.

Each volume of the series begins with a prefatory chapter by a noted pharmacologist who writes of his personal career in the field. The 25-30 other papers may include a review of reviews. There are extensive bibliographies, subject indexes, and some cumulative indexes of contributing authors and chapter titles.

64. **Antibiotics.** Berlin, New York: Springer-Verlag, 1967- .

Vol. 1, **Mechanisms of Action.** Edited by David Gottlieb and Paul D. Shaw. 1967. \$125.40. ISBN 3-540-07240-3.

Vol. 2, **Biosynthesis.** Edited by David Gottlieb and Paul D. Shaw. 1967. \$92.40. ISBN 3-540-03725-X.

Vol. 3, **Mechanism of Action of Antimicrobial and Antitumor Agents.** Edited by John W. Corcoran and Fred E. Hahn. 1975. \$108.90. ISBN 0-387-06653-5.

Vol. 4, **Biosynthesis.** Edited by John W. Corcoran. 1981. ISBN 0-387-10186-1.

Vol. 5, Part 1, **Mechanism of Action of Antibacterial Agents.** 1979. \$109.00. ISBN 0-387-09342-7.

Vol. 5, Part 2, **Mechanism of Action of Antieukaryotic and Antiviral Compounds.** Edited by Fred E. Hahn. 1979. \$123.00. ISBN 0-387-09396-6.

Vol. 6, **Modes and Mechanisms of Microbial Growth Inhibitors.** Edited by Fred E. Hahn. \$115.00. ISBN 0-387-12169-2.

Presented in this series are review articles by experts. The usefulness of the volumes lies in the fact that a very large amount of source literature has been considered and critically reviewed to make in-depth information on the mechanisms of action of chemotherapeutic drugs easily available. The preface of Volume 6 says that it will be the last volume for some time to come because the discovery of medicinally useful antibiotics has leveled off, and the mechanisms of action of the substances are well known now. Topics covered in the first volumes have been covered again in later volumes when new knowledge became available.

65. **Antibiotics and Chemotherapy.** Basel, Switzerland: S. Karger, 1954- . Annual. ISSN 0066-4758. Price varies.

From 1954 to 1970 this publication was called *Antibiotica et Chemotherapia*. The set contains reviews by experts, each volume containing from five to ten articles. Recent volumes have covered such topics as pharmacokinetics, parasitic chemotherapy, and Kaposi's sarcoma.

66. **Cancer Chemotherapy.** Edited by H. M. Pinedo. New York: Excerpta Medica/Elsevier, 1979- . bibliog. index. Annual. About \$70.00 per volume. ISBN 0-444-90084-5.

The aim of this annual publication is to help the clinician solve the problem of keeping up with the literature by supplying him with a yearly, comprehensive review of the most recent data on the experimental and clinical pharmacology of antineoplastic

agents and to keep him abreast of the latest achievements in the treatment of each type of tumor. The annuals deal critically with the reported developments; the authors are experts in the field.

The material is presented in two parts: the first focuses on the drugs and the second on the tumors. The first part is of special interest to pharmacologists, although it also provides for oncologists the basic pharmacologic background to the antineoplastic agents.

67. Drug Therapeutics: Concepts for Physicians. Edited by Kenneth L. Melmon. New York: Elsevier, 1979-. Irregular. About \$32.50 per volume. ISSN 0163-1705.

Designed primarily for the practicing physician, this series provides information on new and old drugs, new therapies, recently discovered mechanisms of action, future directions in therapy, and current issues involving the philosophy and politics of therapeutics. The emphasis is on current practical data that can be used in therapeutic decision making. Timely topics are treated.

68. Foreign Compound Metabolism in Mammals: A Review of the Literature. Senior Reporter: D. E. Hathway. London, England: The Chemical Society, 1970-. Irregular. (Specialist Periodical Reports). About \$135.00 per volume. ISSN 0300-3493.

The importance of foreign compound metabolism continues to be appreciated. This set periodically reviews the literature on the subject and reports progress. Specific areas that have been dealt with in recent volumes include drug kinetics; enzymatic mechanisms of oxidation, reduction, and hydrolysis; enzymatic mechanisms of conjugation; species, strain, and sex differences in metabolism; mechanisms of chemical carcinogenesis; drugs acting on the central nervous system; cardiovascular drugs; food additives; agricultural chemicals; industrial chemicals and miscellaneous organic compounds; and cancer chemotherapeutic agents.

69. Fortschritte der Chemie organischer Naturstoffe. Progress in the Chemistry of Organic Natural Products. Wien, Austria; New York: Springer-Verlag, 1938-. 2 volumes per year. ISSN 0071-7886. Price varies.

This publication presents high-quality review articles covering progress made in natural product chemistry. There are three or four articles per volume.

70. Methods in Pharmacology. General editor: Arnold Schwartz. New York: Plenum, 1971-. Irregular. About \$45.00-\$75.00 per volume. ISBN 0-306-41684-0.

The purpose of *Methods in Pharmacology* is said to be to acquaint the student and the professional investigator with proven techniques that can be used to investigate the action of drugs on both the organic and the molecular levels. Volume 1 is a general volume but with a heavy emphasis on cardiovascular pharmacology. The other volumes to date have covered specific areas as follows: physical methods, smooth muscle, renal pharmacology, and myocardial biology. There have been various editors and contributors.

71. Modern Methods in Pharmacology. Edited by S. Spector and N. Back. New York: Alan R. Liss, 1982-. Irregular. ISSN 0732-7218.

The volumes in this series are intended to provide information about new biochemical pharmacologic techniques and their application. Presentations are featured on current pharmacologic methods that are employed in drug evaluation and related biomedical research.

The series is of value to the pharmacologist attempting to keep up with new techniques and also to technicians and students in pharmacology, neurology, biochemistry, and biology.

72. Progress in Biochemical Pharmacology. Series editor: R. Paoletti. Basel, Switzerland: S. Karger, 1965-. Approximately annual. ISSN 0079-6085.

Each volume in this series has an individual title. In the set drugs are considered as therapeutic agents and curative substances for dealing with various conditions of human health. The contributions, by experts, provide general reviews, specific studies based on original research, and discussions of technical data in controversial areas. Many of the volumes present conference papers.

Recent volume titles include Ecological Perspectives on Carcinogens and Cancer Control; Lipoprotein Metabolism; Endogenous Peptides and Centrally Acting Drugs; Hormones and the Kidney; Endocrinological Aspects of Alcoholism; and Nutrition and Cardiovascular Disease.

73. Progress in Drug Research: Fortschritte der Arzneimittelforschung: Progres des recherches pharmaceutiques. Edited by Ernst Jucker. Basel, Switzerland: Birkhäuser Verlag, 1959-. Annual. About \$100.00 per year.

The first 11 volumes of this series were published under the German title alone. The series provides classic monographs in the areas of medicinal chemistry and pharmacology, containing carefully selected survey articles on the most significant developments. The work is a useful reference source. Cumulated indexes are included in the annual volumes.

74. Progress in Medicinal Chemistry. Edited by G. P. Ellis and G. B. West. Amsterdam, The Netherlands: Elsevier Science Publishers, 1961-. Annual. ISSN 0079-6468.

This is a widely known series that collects monographs in the field of medicinal chemistry and related areas. Each volume contains about six review articles.

75. Radiopharmacy and Radiopharmacology Yearbook. New York: Gordon and Breach Science Publishers, 1984-. Annual. About \$47.00, \$18.00pa. ISSN 0748-6111.

This desk reference offers scientists and clinical specialists a means of keeping in touch with the recent developments of the field. In-depth reviews, selected abstracts of major radiopharmaceutical trends, and timely techniques are presented. Attention is also given to new commercial radiopharmaceuticals for in vivo use with a summary of the application and dose for each product. New books are identified, a list of key manufacturers included, and a calendar of forthcoming scientific meetings provided.

76. Recent Progress in Hormone Research. New York: Academic Press, 1947-. Annual. ISSN 0079-9963.

This series publishes the Proceedings of the Laurentian Hormone Conferences. Since the first volume was issued in 1947, emphasis of the publication has moved from the anatomy and physiology of hormone-secreting organs and target tissues, to cellular endocrine chemistry and biology, to molecular endocrinology and hormonal control of gene expression.

77. Research Advances in Alcohol and Drug Problems. New York: Plenum, 1974-. Annual. ISSN 0093-9714.

This series is not an "annual review" in the usual sense, but it presents critical reviews and assesses current developments in the field with evaluative papers on topics in which enough recent progress has been made to alter the general scope of a particular area of alcohol and drug abuse. The volumes have individual titles.

78. **Reviews in Biochemical Toxicology.** Editors: Ernest Hodgson, J. R. Bend, and R. M. Philpot. New York: Elsevier, 1979- . Annual. ISSN 0163-7673.

The intent of this important series is to play a significant role in the development of the bedrock of knowledge concerning mechanisms, on which all other aspects of toxicology rests. Reviews of the fundamental mechanisms involved in the poisoning and detoxification processes are provided. There are five or six reviews per volume. The volumes of the series can be used as supportive texts for graduate-level teaching.

79. **Reviews of Physiology, Biochemistry, and Pharmacology.** Berlin, Germany: Springer-Verlag, 1902- . About 3 volumes per year. About \$40.00 per volume. ISSN 0080-2042.

The title of this publication has varied since its inception in 1902. During the early years, it had the German title *Ergebnisse der Physiologie, biologischen Chemie und experimentellen Pharmakologie*. Then both the German and English titles were used until 1974.

The series presents critical reviews in a broad spectrum of biomedical subjects. Each slender volume contains three or four review articles written by leading international specialists.

80. **Side Effects of Drugs Annual: A Worldwide Yearly Survey of New Data and Trends.** Edited by M. N. G. Dukes. New York: Elsevier, 1977- . bibliog. index. Annual. About \$75.00 per volume. ISSN 78-644057.

These volumes are published in January each year as supplements to *Meyler's Side Effects of Drugs* (see entry 386), although they have some value when used independently. Their aim is to cover all reports appearing in the year before publication that present significant new information on adverse reactions to drugs.

Like *Meyler's*, the material is arranged in chapters divided by type of drug, and the presentations are similar in structure. There are indexes by name of drug and by side effects. Each volume is introduced by a "Side Effects Drug Essay" on some topic of current interest. Appended is a list of National Centers for Adverse Reaction Monitoring.

The series has become a standard reference in the field of adverse drug reactions and drug monitoring.

81. **Terpenoids and Steroids: A Review of the Literature.** Senior Reporter: J. R. Hanson. London, England: The Royal Society of Chemistry, 1970-1983. 12 vols. Annual. (Specialist Periodical Reports). About \$45.00 per volume. ISSN 0300-5992.

The material that was covered in this discontinued series is now treated in a relatively new journal, *Natural Products Reports* (see entry 880). The terpenoid and steroid literature was reviewed each year, covering such areas as isolation, structures, laboratory synthesis, reactions, physical methods of structural determination, biosynthesis, and metabolism. The series was highly regarded.

82. **Year Book of Drug Therapy.** Edited by Leo E. Hollister and Louis Lasagna. Chicago, IL: Year Book Medical Publishers, 1933- . illus. bibliog. index. Annual. About \$40.00 per volume.

This publication was formerly called *Year Book of General Therapeutics* (1933-1948). It is a clinically oriented guide to the year's most significant journal articles, allowing easy access to the worldwide literature. Summaries (about one-half page in length) of about 400 papers are presented each year arranged under various headings with interesting and often amusing comments supplied by the editors. For instance, in regard to oral contraceptives, these comments appear: "At least there's no evidence here that oral contraceptives *increase* the risk of ovarian cancer. We ought to be grateful for small favors" and "Despite long-standing theoretical worries about increasing the risk of breast cancer as the result of prescribed oral contraceptives, the passing years have thus far not produced any evidence that such is the case, thank God."

Almost all fields of medicine are covered in highly selective fashion. It is stated that the number of articles selected for inclusion is fewer than 5 percent of those reviewed by the editors.

Part B—Miscellaneous Other

83. International Narcotics Control Board. **Report of the International Narcotics Control Board.** New York: United Nations, 1968- . Annual. About \$5.00.

The responsibilities of the International Narcotics Control Board under the drug control treaties are to endeavor to limit the cultivation, production, manufacture, and utilization of narcotic and psychotropic drugs to the amount needed for medical and scientific purposes only, to ensure that necessary quantities are available, and to prevent the illicit use of these substances. Governments are to provide the board with relevant information to enable it to perform its task.

This United Nations document contains sections on operation of the board, world requirements of opiates, developments in illicit traffic, and an analysis of the world situation, country by country.

84. International Narcotics Control Board. **Statistics on Psychotropic Substances.** New York: United Nations, 1977- . Annual. About \$10.00.

The statistics reported in this publication are furnished by governments in accordance with the Convention of 1971 on Psychotropic Substances, Resolution I of the United States Conference for the adoption of a protocol on psychotropic substances and Resolution 1576(L) of the Economic and Social Council.

Psychoactive substances under international control are divided into four schedules. Practically all countries have schedule I drugs under control, and they are the least utilized. Schedule II drugs are under control in most countries and are somewhat utilized. In regard to substances in schedules III and IV, the competent authorities do not control all the substances in these classes in many countries. Schedule IV drugs are most widely used, and they have not been brought under control in many countries.

More than 100 countries furnish statistics for this report. An introductory section lists the countries providing statistics and those that do not. The drugs are listed by schedule number, and information is given about their production, particularly comparisons with earlier figures. Then follow four comprehensive tables that contain information about the drugs in each of the schedules, such as movement in manufacturing countries and international trade, by country and date.

Some of the material appears in French and Spanish as well as in English.

85. **The Lilly Digest.** Indianapolis, IN: Eli Lilly and Co., Pharmaceutical Division, 1932- . Annual.

Published as a service to the pharmacy profession, this annual digest is designed as a resource to be used by independent community pharmacy managers in evaluating the operating figures of the individual stores. It is hoped that the information provided can help them make proper managerial decisions. The digest also can be of value in determining overall trends in pharmacy operations. The publication presents averages of actual operations statistics that were reported to Lilly voluntarily.

The following kinds of information are provided, much of it in tables and graphs: current trends in operations, sales and expenses, prescription department analysis, operations according to sales and number of prescriptions dispensed daily, net profit, regional variations, pharmacy location, rent, balance sheet and financial ratios, and the Lilly analysis service.

Lilly has published two other similar publications, the *Lilly Hospital Pharmacy Survey* and *The NACDS-Lilly Digest: A Survey of Chain Pharmacy Operations* (see entries 86 and 87). All three are free to the pharmacy profession.

86. **Lilly Hospital Pharmacy Survey.** Indianapolis, IN: Eli Lilly and Co., Pharmaceutical Division, 1976- . Annual.

Eli Lilly and Company presents yearly this compilation of economic operating statistics that were submitted by hospital pharmacy directors and managers in response to a questionnaire. Pharmacy managers can use such a resource to evaluate their strengths and weaknesses. Text material, charts, and graphs cover the following topics: current trends overview, general statistics, pharmacy personnel requirements, drug distribution systems, inventory and purchases, outpatient pharmacies, satellite pharmacies, pharmacy staff payroll, prescription activity, pharmacy services, geographic data, hospital pharmacy participants—one year later. A comparative analysis worksheet is provided.

Lilly has published two other similar publications, the *Lilly Digest*, which covers the independent community pharmacy, and *The NACDS-Lilly Digest: A Survey of Chain Pharmacy Operations* (see entries 85 and 87).

87. **The NACDS-Lilly Digest: A Survey of Chain Pharmacy Operations.** Indianapolis, IN: Eli Lilly and Co. in cooperation with the National Association of Chain Drug Stores, Inc., 1970- . Annual.

Presented in this annual publication is a summary of detailed financial and operating statistics of chain pharmacies. More than 1200 chain pharmacies have submitted data in recent years. The primary purpose of the digest is to provide useful information about the chain pharmacy industry with which a manager can compare and evaluate an individual unit's performance.

The statistical information is presented in these sections, much of it in graphs and tables: current trends in chain pharmacy operations, sales and expenses, prescription department review, ten-year trends in pharmacy operations, operations according to sales and prescription activity, review by number of units, rent review, pharmacy location, pharmacy hours, geographic review, typical purchase mix, and two-year comparison of the same pharmacies.

The publication is similar to the *Lilly Digest* (see entry 85), which presents information on independent community pharmacies, and the *Lilly Hospital Pharmacy Survey* (see entry 86).

88. **NDA Pipeline.** Chevy Chase, MD: FDC Development Corporation, 1982 (published 1983)- . Annual. \$95.00.

This is a company-by-company compilation of drug development activity in the United States, including new compounds in research and those that have obtained FDA market approval. It also includes discussions and recommendations from FDA advisory committees as reported in *FDC Reports—“The Pink Sheet”* (see entry 801).

These sections are included: (1) New drug approvals/research projects by company; (2) Original NDA approvals; (3) Address and phone index for companies mentioned in the book; (4) List by generic name and company; and (5) FDA Rx Drug Advisory Committee activities.

89. National Association of Boards of Pharmacy. Districts 1-8. **Proceedings of the Joint Meeting of the National Association of Boards of Pharmacy and the American Association of Colleges of Pharmacy.** Chicago, IL: National Association of Boards of Pharmacy, about 1925- . Annual.

In 1919 the National Association of Boards of Pharmacy approved a plan to divide the United States into a number of districts, each to be presided over by its own officers. During the early years, the boards met intermittently to discuss national and local problems of mutual concern. As district meetings became more popular and a mechanism for better communication with colleges of pharmacy developed, college deans and faculty personnel were invited to attend. Board members and faculty exchanged views and reached joint decisions to guide the parent bodies, the American Association of Colleges of Pharmacy and the National Association of Boards of Pharmacy.

These reports present the meeting proceedings from the districts and also in many cases include formal papers.

90. **National Prescription Audit, General Information Report.** Ambler, PA: IMS America, Ltd., 1962- . Annual.

The material in this report has been extracted from the National Prescription Audit, a nation-wide marketing research service conducted by IMS America, Ltd. It highlights trends in pharmacy prescription activity.

Most of the data is presented in about 25 tables, divided among these sections: (1) Total Rx market and therapeutic classes—review; (2) The generic market and changes—review; (3) Prescription prices and changes—review; (4) Prescription market by company groupings—review; and (5) New product and leading product statistics and changes—review.

There is a vast amount of useful, hard-to-find information in this publication. It will answer many reference questions. For instance, there is an alphabetical listing of the leading 500 pharmaceutical products dispensed as new Rx's with the top 200 products asterisked.

91. U.S. Food and Drug Administration. **Food and Drug Administration Annual Report.** Washington, DC: Government Printing Office, 1896- . Annual.

In these reports the agency shares with the reader each year an impression of the complex nature of developing and implementing rational regulatory policies in areas of disagreement and in areas where national health questions are at stake. The hope is that the reader will better understand or participate in the decisions that determine the nation's food and drug policies. The reports are usually 40-50 pages in length and cover

such areas as program activities and accomplishments, major issues of the year, and regulatory process improvements. Appendices provide statistical information.

In 1977 a 71-page cumulative index to the *Annual Reports* covering the years 1950-1974 was compiled by Edward M. Shoemaker and published by the American Institute of the History of Pharmacy.

4 Pharmacopeias and Standards

Pharmacopeias are instruments that provide assurance of the quality of medicines that reach the consumer. They are collections of standards intended to protect the patient. Pharmacopeias are usually "official" publications; virtually every country has one, has adopted that of another, or has collaborated to produce one. Of recent years the practicing pharmacist, in the United States at least, has made little use of the pharmacopeia, although it is of value to the manufacturing pharmacist and those interested in analytic procedures. Incidentally, however, the U.S. Pharmacopial Convention has published other works recently that are of use to the practicing pharmacist. These publications are discussed in the section on "Drug Compendia" (entries 356, 357, and 358).

This section lists a number of pharmacopeias and another publication with a similar purpose, *Biological Substances: International Standards, Reference Preparations, and Reference Reagents* (entry 93).

92. American Institute of Homoeopathy. The Pharmacopoeia Convention. **The Homoeopathic Pharmacopoeia of the United States**. Published under the direction of the Pharmacopoeia Convention of the American Institute of Homoeopathy. 8th ed. Falls Church, VA: American Institute of Homoeopathy, 1979- . bibliog. index. Supplement A, 1982.

This pharmacopoeia sets the standards for the preparation of homoeopathic medicines. The eighth edition is to consist of two volumes. The first includes introductory material (mostly historical), a general pharmacy section, monographs about medicinal substances (the main section), and tables for reference. The second volume, yet to be published, is to consist of more monographs. Supplement A includes

information about the Homoeopathic Pharmacopoeia Convention, general pharmacy information, tables, and a section entitled "Classification of drugs according to method of preparation" that describes the methods.

The monographs in Volume 1 are arranged alphabetically by the name of the medicinal substance. Most are of plant origin. Information provided includes scientific name of the plant, synonyms, description, habitat, history, parts used, and instructions on making preparations.

93. Biological Substances: International Standards, Reference Preparations, and Reference Reagents. Geneva, Switzerland: World Health Organization, 1984. 91p. bibliog. index. ISBN 92-4-154199-7.

The primary purpose of these standards is to "provide a means of ensuring uniformity throughout the world in the designation of the potency or activity of preparations that are used in the prophylaxis, therapy, or diagnosis of human and some animal disease and that cannot be expressed directly in terms of chemical and physical quantities." For this purpose, International Units (IU) have been assigned to biological substances.

The list presented here is brought up to date every few years. The material is in tabular format and covers the following products: antibiotics, antigens, blood products and related substances, endocrinologic and related substances, biologic reference reagents, immunologic substances, and pharmacologic substances. The following information is provided for each product: name of the preparation, IUs per ampule, mg/IU (if relevant), form in which available, years of establishment, and references to the literature (usually World Health Organization publications).

94. British Pharmacopoeia 1980. Published on the recommendation of the Medicines Commission pursuant to the Medicines Act 1968. London, England: Her Majesty's Stationery Office, 1980. 2 vols. index. \$165.00 the set. ISBN 0-11-320688-7.

This edition of the official pharmacopoeia of Great Britain is greatly enlarged from that of 1973 in that it contains an extensive formulary section and standards for surgical dressings. In addition, it reproduces, in an edited form, all relevant monographs and methods of the *European Pharmacopoeia* (see entry 96).

Volume 1 of the work contains an introduction, general notices, and monographs specifying standards for medicinal and pharmaceutical substances. Included is information on action, uses, dose, solubility, storage, and labeling of the products. Volume 2 contains the formulary of preparations; monographs that specify standards for blood products, immunologic products, radiopharmaceuticals, and surgical materials; and appendices dealing with tests and assay techniques.

Addenda to the pharmacopoeia are issued from time to time to keep it up to date. A complementary volume, *British Pharmacopoeia 1980: Infra-red Reference Spectra* (see entry 509) has been published.

95. British Pharmacopoeia (Veterinary) 1977. London, England: Her Majesty's Stationery Office; distr. Pharmaceutical Press, 1977. 228p. index. \$27.00. ISBN 0-11-320624-0.

Produced by the British Pharmacopoeia Commission in accordance with the Medicines Act 1968, this work is to be used in conjunction with the *British Pharmacopoeia* (see entry 94). It provides standards of identity and purity for medicinal and pharmaceutical substances and immunologic products used in veterinary medicine.

Brief information is included on use, dose, solubility, storage, and labeling; in addition, there is a 57-page formulary section.

96. **European Pharmacopoeia.** Published under the direction of the Council of Europe (partial agreement) in accordance with the Convention on the Elaboration of a European Pharmacopoeia. 2nd ed. Sainte-Ruffine, France: Maisonneuve, 1980- . (European Treaty Series, no. 50). Text also published in French. \$175.00 (Pt. 1). ISBN 0-7160-0079-0 (Pt. 1).

Eight European countries agreed to accept the standards of the *European Pharmacopoeia* for their own national pharmacopoeias. These countries are the United Kingdom, Belgium, France, German Federal Republic, The Netherlands, Italy, Luxembourg, and Switzerland.

The standards as presented in the first edition of the work (in three volumes with supplements) became effective in 1972. The second edition is now being published a section at a time. Part I contains biologic methods, chemical and physicochemical methods of analysis, reagents, and so forth, and Part II contains monographs on the drugs. The monographs are published in four semiannual sections. Each section includes amended monographs from the first edition, newly approved monographs, and additions and amendments to previously published parts of the second edition. A loose-leaf binder is available for keeping all the parts together and up to date.

The history and background of the *European Pharmacopoeia* are outlined in an article in *Pharmacy International* vol. 46, no. 8 (1984) pages 843-845 (see entry 909).

97. **The International Pharmacopoeia.** 3rd ed. Geneva, Switzerland: World Health Organization, 1977- . index. 24 Swiss francs per volume. ISBN 92-4154150-4 (vol. 1); 92-4-154151-2 (vol. 2).

The *International Pharmacopoeia* is a collection of recommended methods and specifications that are not intended to have legal status in any country, unless a country would so desire and the necessary legislation is effected. They serve instead as references for national standards. Earlier additions of the pharmacopoeia appeared in several languages. It is not clear whether this is the intent with this edition.

Volume 1 contains descriptions of general methods of analysis. There are sections on physical, physicochemical, chemical, and biologic methods and methods of pharmacognosy. Volume 2, "Quality Specifications," contains monographs on 126 individual drugs and pharmaceutical substances, primarily those most widely used in general health care. It is planned that subsequent volumes will be added to the work that will present more monographs.

For some of the drugs listed, no international quality specifications have been issued to date. Some of the specifications, however, are revised versions from the second edition. The monographs are arranged alphabetically by Latin name. Infrared reference spectra are mentioned in a number of the monographs. It is planned that a separate publication containing reproductions of such spectra will be issued at a later date.

The monographs usually include names (generic and common), molecular formula, graphic formula, chemical name, description, solubility, category, storage, labeling, and requirements (including identity tests, assay, and so on).

98. **United States Pharmacopeia**, 21st revision. **The National Formulary**, 16th ed. By authority of the United States Pharmacopeial Convention, Inc., meeting at Washington, DC, 17-19 April 1980. Prepared by the Committee of Revision and published by the Board of Trustees. Official from 1 January 1985. Rockville, MD: United States Pharmacopeial Convention, Inc., 1984. 1683p. index. \$155.00. LC 83-640088. ISBN 0-913595-04-7. ISSN 0195-7996.

These two works, which are bound together, are the legally recognized compendia of standards for drug strength, quality, purity, packaging, labeling, and storage for most U.S. drugs. They are kept up to date between revisions by cumulative supplements, and interim revisions are announced in the journal *Pharmacopeial Forum* (entry 905). The first USP was published in 1820 and the first NF in 1888. They have been published together as a single volume only since the 1980 edition. In the 1980 edition, the scope of both the USP and the NF was changed, the USP being limited to drug substances and dosage forms, and the NF being limited to pharmaceutical ingredients. They are distinct compendia. It is said that the new USP includes more technologically advanced requirements than appeared in previous revisions. A large panel of experts contribute to the revision of these official works.

The monographs of the USP are arranged alphabetically by name of substance. Information provided includes strength, packaging and storage information, reference standard, identification, dissolution, uniformity of dosage units, and assay. Chemical formulas and sometimes structural diagrams also are included. In addition to the monographs there are also included "General Chapters," including requirements for general tests and assays and general information; a chapter on reagents, indicators, and solutions; and a number of reference tables.

The NF monographs are similar to those of the USP in arrangement and information provided. Also included is an NF section of reagents and miscellaneous tables. There is a combined USP and NF index.

It is of note that virtually every country of the world has an official compendia or has adopted one of another country or group of countries. The USP and NF both include good chapters about their own history.

Although this is the largest USP-NF ever, including more drug substances and drug products with more technologically advanced requirements than any previous edition, the Pharmacopeial Convention plans that by 1990 monographs for all drug entities and, to the extent possible, all drug products marketed in the United States will be included in the official compendia.

5 Comprehensive Works

There are a number of inclusive, encyclopedic, or comprehensive publications available in the pharmaceutical field, and some of them are of great value.

Several are scholarly, multiple-volume works of the German "Handbuch" type that are used primarily by the research scientist. Others, such as *Martindale: The Extra Pharmacopoeia* (entry 105), which is not a pharmacopeia in the usual sense of the word, and *Remington's Pharmaceutical Sciences* (entry 107), are very important to the practicing pharmacist and the librarian for their reference value.

99. Dittert, Lewis W., ed. **Sprowls' American Pharmacy: An Introduction to Pharmaceutical Techniques and Dosage Forms**. 7th ed. Philadelphia, PA: J. B. Lippincott, 1974. 511p. illus. bibliog. index. LC 73-20013. ISBN 0-397-52058-1.

The first edition of this popular classic work appeared in 1945. The early editions of this work emphasized preparations appearing in the official compendia and illustrated various formulation and compounding techniques. Pharmacy practice has changed, however, and pharmacists rarely compound drugs extemporaneously today. This edition devotes more space to complex scientific aspects and large-scale manufacturing techniques involved in the formulation and production of modern pharmaceuticals. All chapters also include some discussion of the in vivo performance (or biopharmaceutics) of the dosage forms under consideration. Today the pharmacist plays a role on the health care team as the expert on drug products and their usage. He must understand the scientific and technical aspects involved in the manufacture of drugs and their performance, to which this book provides an introduction.

Chapter headings are: (1) An introduction to dosage forms; (2) Pharmaceutical measurements; (3) Solutions containing nonvolatile materials; (4) Aqueous solutions containing aromatic principles: water, syrups, and juices; (5) Solutions using

mixed-solvent systems: spirits, elixirs, and extracted products; (6) Colloidal and surface-chemical aspects of dosage forms; (7) Coarse dispersions: suspensions, emulsions, and lotions; (8) Semisolid dosage forms: ointments, creams, and pastes; (9) Molded solid dosage forms: suppositories; (10) Powdered dosage forms; (11) Tablets and tablet product design; (12) Gas dispersions (aerosols and sprays); (13) Radioactive dosage forms; and (14) Sterile products.

Although the book is somewhat old, it covers basic matters that are still of interest, and it is still used.

100. **Encyclopedia of Plant Physiology.** New Series. Edited by A. Pirson and M. H. Zimmerman. Berlin, Germany; New York: Springer-Verlag, 1975-. illus. bibliog. index.

An earlier edition of this classic scholarly work, edited by W. Ruhland, was issued from 1955 to 1967 under the title *Handbuch der Pflanzenphysiologie*. Editors of the individual volumes have varied. The encyclopedia presents long monographs on special topics; sometimes they cover several volumes of the set.

Recent volumes have covered such topics as hormonal regulation of development, transport in plants, photosynthesis, plant carbohydrates, nucleic acids and proteins in plants, photomorphogenesis, cellular interactions, and secondary plant products. The work is of most value to those in the pharmaceutical sciences who are interested in medicinal chemistry and pharmacognosy.

101. **Hagers Handbuch der Pharmazeutischen Praxis für Apotheker, Arzneimittelhersteller, Ärzte und Medizinalbeamte.** 4th ed. Original editor: Walther Kern; recent editors: P. H. List and L. Hörhammer. Berlin, Germany: Springer-Verlag, 1967-. illus. bibliog. About \$100.00 per volume. LC 67-23458.

This is a revised edition of an old, well-known, comprehensive German "Handbuch" of pharmacy practice that has been issued a volume at a time over a period of years and is still in progress. The entire field is being covered very thoroughly and in scholarly fashion. The nearest American counterpart of the work is *Remington's Pharmaceutical Sciences* (see entry 107).

102. **Handbuch der Experimentellen Pharmakologie; Handbook of Experimental Pharmacology.** Berlin, Germany: Springer-Verlag, Old Series, 1920-1935 (3 volumes in 7). Supplements, 1935-. (Vols. 16-date of supplement are labeled "New Series").

The original editors of this important series were A. Heffter and W. Heubner. Recently the editors have varied. There are over 100 volumes in the supplementary series covering a wide range of topics. Coverage of some of the topics is spread over several volumes.

Subjects covered in recent volumes include cardiac glycosides, the pharmacology of intestinal permeation, antitumor drug resistance, aminoglycoside antibiotics, mediators and drugs in gastrointestinal motility, interferons and their applications, and psychotropic agents.

The work is scholarly and most suitable for the research audience.

103. **International Congress of Pharmacology. Proceedings of the International Congress of Pharmacology.** Oxford, England: Pergamon Press, 1969-. Triennial.

The first three sets of these meeting papers were called *Proceedings of the International Pharmacological Meeting*. The first meeting was held in 1961. The proceedings consist of five to ten small hard-bound volumes for each meeting, each on a

specific topic and by various authors. The volumes for the seventh and eighth meetings bear the title "Advances in Pharmacology and Therapeutics" and cover such topics as receptors, neurotransmitters, prostaglandins, drug-action modifications, and neuropsychopharmacology.

The Proceedings of the Ninth Congress, held in London in 1984 and published by Macmillan Press, covers such topics as developments in molecular and receptor pharmacology; biochemical mechanisms of toxicology; drug metabolism; the design and development of new drugs (particularly anti-infective and cardiovascular agents); new pharmacologic approaches to protecting the heart and gut from the effects of injury; genetic engineering in pharmacologic research; and prostacyclin and its development into clinical use.

104. **International Encyclopedia of Pharmacology and Therapeutics.** Sponsored by the International Union of Pharmacology (IUPHAR). Oxford, England: Pergamon Press, 1966-. About \$50.00-\$140.00 per volume.

Published in sections, each part of this encyclopedia covers a specific topic. The volumes are made up of a collection of review papers by various authors which have been selected from articles published in the journal *Pharmacology and Therapeutics* (see entry 904). Over 100 sections have been issued to date. Recent volumes have covered these topics: inhibitors of mitochondrial function, antihypertensive drugs, the chemotherapy of psoriasis, antiviral chemotherapy, and pain and its management.

105. **Martindale: The Extra Pharmacopoeia.** 28th ed. Edited by James E. F. Reynolds and Anne B. Prasad. London, England: The Pharmaceutical Press, 1982. 2025p. bibliog. index. \$130.00 ISBN 0-85369-160-6.

Usually referred to as "Martindale," this 100-year-old classic work is the most comprehensive source of drug information available in a single volume. It is a superb work, including drugs from many countries and those currently being tested in clinical use. There are monographs on over 5100 drug substances with 55,000 selected abstracts and references. The index contains about 70,000 entries. The aim of the publication is to provide a summary of the properties, actions, and uses of drugs, primarily for the pharmacist and the medical practitioner. It is especially valuable for drug information centers.

The presentation is in three parts. The first (and largest) part contains monographs on about 4000 substances in 105 chapters, arranged to bring together drugs of similar uses or actions. Part 2 presents short monographs on 1120 drugs and ancillary substances. These monographs contain information on new drugs, drugs under investigation, drugs not easily classified, and obsolescent drugs still of interest. Part 3, a short section, gives the composition of about 900 over-the-counter proprietary medicines, together with their manufacturers. There is a directory of manufacturers, an index to clinical uses, a general index, and an index to Martindale identity numbers. The latter is a unique number for each monograph that will be used for future online computer retrieval. From 1983 onward there is databank access to new and relevant information on each drug (see entry 694).

There is a vast amount of valuable pharmacologic and therapeutic information included in the book's monographs. They begin with the identity number, then give drug names in English with preference given to British approved names, United States adopted names, international nonproprietary names, and names used in the *European Pharmacopoeia* (see entry 96). Many synonyms, however, are provided, including those that are Latin, French, German, Spanish, Scandinavian, and others, as well as English

and American ones. Botanic and chemical names are also included, and the pharmacopoeias in which a particular drug appears are listed. In addition, where relevant, atomic and/or molecular weight information is included as is information on osmotic properties, solubility, and required storage conditions.

It is interesting that William Martindale called the first edition of his work (published in 1883) "a little book." It contained 313 pages as compared to 2025 pages in the latest edition, an indication of how drug literature has grown in 100 years.

106. **Medicinal Chemistry: A Series of Monographs.** New York: Academic Press, 1963-. bibliog. index. Irregular.

This is an important monographic series intended for the research audience. Each volume, written by various authors who are experts, covers a different aspect of the medicinal chemistry field. Some volumes are made up of more than one part.

Authors/editors and titles of the volumes are as follows: (1) deStevens: Diuretics; (2) Paoletti: Lipid Pharmacology; (3) Ariens: Molecular Pharmacology; (4) Gordon: Psychopharmacological Agents; (5) deStevens: Analgesics; (6) Thorp-Cobbin: Cardiac Stimulant Substances; (7) Schlittler: Antihypertensive Agents; (8) von Euler-Eliasson: Prostaglandins; (9) Campbell: Oral Hypoglycemic Agents; (10) Kier: Molecular Orbital Theory in Drug Research; (11) Ariens: Drug Design; (12) Thompson-Werbel: Antimalarial Agents: Chemistry and Pharmacology; (13) Scherrer-Whitehouse: Antiinflammatory Agents; (14) Kier-Hall: Molecular Connectivity in Chemistry and Drug Research; (15) Vida: Anticonvulsants; (16) Cassady-Douros: Anticancer Agents Based on Natural Product Models; (17) Arcamone: Doxorubicin; (18) Margulies: Myocardial Infarction and Cardiac Death; (19) Topliss: Quantitative Structure Activity Relationships of Drugs; (20) Mager: Multidimensional Pharmacochemistry: Design of Safer Drugs; and (21) Chakin-Bailey: The Leukotrienes: Chemistry and Biology.

107. **Remington's Pharmaceutical Sciences.** 17th ed. Edited by Alfonso R. Gennaro. Easton, PA: Mack Publishing Co., 1985. 1984p. illus. bibliog. index. \$85.00. LC 60-53334. ISBN 0-912734-03-5.

This work has been called "a treatise on the theory and practice of the pharmaceutical sciences, with essential information about pharmaceutical and medicinal agents; also a guide to the professional responsibilities of the pharmacist as the drug-information specialist of the health team. . . . A textbook and reference work for pharmacists, physicians, and other practitioners of the pharmaceutical and medical sciences." Its contributors and editorial board are noted educators and scientists in the field, and it is the leading text and reference work in the field of pharmacy.

The book is in nine parts, each several chapters in length. Part 1 is an orientation to the field and includes material on ethics and the literature of pharmacy. Part 2, called "Pharmaceutics," is concerned with the scientific aspects of pharmacy. There are chapters on statistics, measurement, and basic mathematics and chemistry. Part 3 deals with pharmaceutical chemistry and includes chapters on inorganic and organic pharmaceutical chemistry, natural products, drug nomenclature, and structure-activity relationship in drug design. Part 4 takes up radioisotopes in pharmacy and medicine. Part 5 deals with the testing and analysis of drugs. Part 6, the longest section, covers pharmaceutical and medicinal agents. Most of the chapters in this section discuss groups of drugs used for specific disease conditions, that is, there are chapters on such topics as gastrointestinal drugs, topical drugs, and so forth. Part 7, on biologic products, primarily covers immunizing agents and allergenic extracts. Part 8 contains

chapters on pharmaceutical preparations and their manufacture. Part 9 is devoted to pharmaceutical practice.

It is difficult to compare this work with others in the field because there is no other very similar to it. *Martindale: The Extra Pharmacopoeia* (see entry 105) is perhaps the most like it in comprehensiveness, but *Remington's* covers the whole field of pharmacy, including practice, whereas *Martindale* is concerned just with drug products and therapeutic information.

6 Pharmacy: Education and Profession

Included in this section are materials dealing with two somewhat related subjects, pharmaceutical education and pharmacy as a profession. Several titles listed cover various aspects of pharmacy education that have been receiving attention recently. These include pharmacy schools' admission requirements, the curriculum, certification and licensure, graduate education, and standards for library service. Several of the titles are candidates' guides to pharmacy licensure that include sample questions for study. Such publications are very popular with students.

Miscellaneous publications listed dealing with pharmacy as a profession include titles covering women in the profession, the role of the profession, and characteristics of pharmacists.

108. American Association of Colleges of Pharmacy. **Pharmacy School Admission Requirements.** Bethesda, MD: American Association of Colleges of Pharmacy (4630 Montgomery Ave., Suite 201, Bethesda, MD 20014), 1973/74- . Biennial. Annual supplements issued recently.

Pharmacy education and practice have undergone changes in recent years as a result of the rapid scientific advances in drug development and the increasing demand for health services by society. Pharmacists are being trained to participate more actively in the direct care of the patient. For these reasons, this publication is important. It provides information about each school in the United States, including general information, curriculum, requirements for entrance, selection factors, advanced placement tests, financial aid, miscellaneous information, timetable of application and acceptance, estimated expenses, and information about the first professional year class. The arrangement is by state. Projections for the coming year are included in each edition.

109. American Pharmaceutical Association. **The Final Report of the Task Force on Pharmacy Education.** Washington, DC: American Pharmaceutical Association, 1984. 116p. bibliog. index. \$25.00pa. ISBN 0-917330-52-8.

This document is a report of the Task Force's study, thought, findings, and recommendations about pharmacy education. Included are sections headed as follows: (1) Executive summary; (2) Introduction; (3) Pharmaceutical services—present and future; (4) Subject areas for the pharmacy curriculum; (5) The professional practice degree; (6) Where education should take place; (7) The external degree question; (8) The consortium; (9) Additional training; (10) Resources required to advance education and training; and (11) Supportive personnel—a brief statement. There are several appendices: (1) Open hearing participants; (2) Information sources; (3) Correspondence/interviews; (4) Open hearing—selected quotations; (5) Core curriculum rationale; (6) Review process for curriculum or degree changes; and (7) A model consortium agreement. There are 106 literature references included and a bibliography of about 23 pages.

110. American Pharmaceutical Association. Board of Pharmaceutical Specialties. **Nuclear Pharmacy Certification Examination Candidate's Guide.** Washington, DC: American Pharmaceutical Association, 1982. 20p. \$12.00pa.

Intended for pharmacists who are candidates for certification in the specialty of nuclear pharmacy, this guide contains general information about the Board of Pharmaceutical Specialties, the development of the certification process, a description of the process, experience requirements for certification, and the certification examination. A few pages of sample questions have been included. Appended is a section on nuclear pharmacy practice standards.

111. American Pharmaceutical Association. Task Force on Women in Pharmacy. **Women in Pharmacy: Final Report.** Washington, DC: American Pharmaceutical Association, 1981. 75p. illus. bibliog. \$15.00pa.

This report was based on a presentation by the American Pharmaceutical Association Task Force on Women in Pharmacy before the 128th APhA Annual Meeting, 29 March 1981, in St. Louis, MO. The primary mission of the Task Force was to identify and recommend a program to address the needs of women in pharmacy and assess the impact of the increasing number of women entering the profession. Six issues were identified as follows: (1) The image of women pharmacists held by the public and other health care professionals; (2) Status of women pharmacists within the profession; (3) Practice patterns and career commitment of women pharmacists; (4) Educational needs of women pharmacists; (5) Influence of women pharmacists in determining practice standards through their organizational involvement; and (6) Expanded horizons for women pharmacists. The report contains a chapter on each of the aforementioned issues in addition to an executive summary and an introduction to the report. Some interesting appendices are also included such as a summary of presentations made by women pharmacists and comments received through correspondence.

The Task Force developed 12 recommendations as follows: (1) An office of women's affairs should be established by the American Pharmaceutical Association; (2) The profession must develop a mechanism for gathering and reporting manpower data on practicing pharmacists; (3) Women pharmacists should insist on equal pay for equal work and responsibility, and men pharmacists should support this expectation; (4) State

pharmacy organizations should make a commitment to getting women pharmacists involved in their organizations; (5) State associations should consider forming their own task forces on women in pharmacy with both women and men represented; (6) Qualified women pharmacists should be encouraged to seek out ownership or management positions; (7) More women pharmacy graduates should be encouraged to continue their education in graduate programs; (8) More women should be encouraged to pursue careers in pharmacy education; (9) Pharmaceutical industry should make educators more aware of career opportunities for pharmacy school graduates; (10) Schools of pharmacy should provide more career guidance to their students; (11) Recruitment material needs to be updated to stress career roles for women; and (12) Advertisements via any media in which a pharmacist is presented should use a woman on a regular basis to represent the pharmacist.

112. **A Candidate's Guide to the National Association of Boards of Pharmacy Licensure Examination.** Chicago, IL: National Association of Boards of Pharmacy, 1976- . Annual. (Cover title: *NABPLEX, A Candidate's Guide*).

The forerunner of this booklet was called *Candidate's Guide to the Blue Ribbon Examination for Licensure to Practice Pharmacy*. The aim of the publication is to help candidates seeking licensure to prepare for NABPLEX, The National Association of Boards of Pharmacy's licensure examination. This examination is not used exclusively in all the states of the United States, but it is administered in most of them.

The booklet contains the following sections: (1) When the examinations are given; (2) The day of the examination; (3) Taking the test; (4) Reporting of examination results; (5) The NABPLEX tests; (6) Sample test questions; and (7) Answer keys.

113. Cocolas, George H., ed. **Graduate Program Guidebook.** Bethesda, MD: American Association of Colleges of Pharmacy, 1979. 496p. index.

This is a guide to all the graduate programs offered by schools of pharmacy in the United States. Its aim is to encourage interested pharmacy students to enter graduate programs in the pharmaceutical sciences by acquainting them with the programs available. It is also of value to faculty, deans, the drug industry, and government agencies because it is a comprehensive resource document on all graduate programs in the field. The guidebook was prepared from information provided by the schools. Included are descriptions of 233 different programs in 54 schools.

The programs are listed by discipline as follows: (1) Biologic sciences (including programs in pharmacology, toxicology, biology, physiology, and microbiology); (2) Hospital pharmacy (including programs in clinical pharmacy); (3) Pharmaceutical chemistry (including programs in analytic chemistry, biomedical chemistry, medicinal chemistry, and radiopharmacy); (4) Pharmaceutics (including programs in biopharmaceutics, cosmetic science, industrial pharmacy, and pharmacokinetics); (5) Pharmacognosy (including programs in natural products); (6) Pharmacy administration (including programs in behavioral and administrative sciences) and continuing education. The programs are described only once in the book. Multidisciplinary programs are cross-listed in tables at the beginning of each section and in the index. The sections list the schools by state alphabetically, describing their programs and including information about admission requirements, financial aid, the cost of study, curriculum, facilities, faculty and their research interests, and addresses and individuals to contact for applications and more information.

114. **Pharmacy Examination Review.** Vol. 1. By Robert J. Gerraughty; contributing editor, Frank Palmieri. Garden City, NY: Medical Examination, 1960-. Revised every 2 or 3 years. \$15.95pa.

The subtitle of this book is "1,500 Multiple Choice Questions and Explanatory Answers." It provides a comprehensive review of the field, including sections on pharmacy, pharmacology, microbiology and public health, chemistry, biochemistry, physiology, and pathology. The purpose of the book is to help the reader determine his ability to comprehend and apply the accumulation of knowledge in the field of pharmacy.

Some reviewers feel that the work will have limited value in assisting the user in reviewing for state board examinations because some sections do not deal enough with direct drug applications; that is, they deal more with basic scientific principles.

115. Robbins, Jack. **Pharmacy: Profession in Search of a Role.** Stamford, CT: Navillus Publishing, 1979. 143p. bibliog. index. \$14.95. LC 79-90142. ISBN 0-935364-00-5.

The author of this work is a pharmacist and holds a Ph.D. in psychology. He has presented an examination of the past, present, and future of the profession of pharmacy. The author's feeling is that of all the health care professions, pharmacy has received the least attention from social scientists. "We have to look very far," he says, "to find a Dr. Welby of the pharmaceutical profession." In addition, the health care delivery system is undergoing unprecedented change, particularly where pharmacy is concerned. Politicians are devoting a high percentage of their thinking to the matter of the pharmaceutical industry, the drug distribution system, drug consumption, and the costs related to drug research, production, distribution, and consumption.

Chapter headings are: (1) Introduction; (2) Present research; (3) Research design and sample description; (4) Opinions about the industry and selected companies; (5) Generational effects: younger versus older pharmacists; (6) Practice setting preferences; (7) Feelings about physicians, pharmacists, and pharmacy; (8) Role conflict and social change; (9) Summary, conclusions, and future trends. There are a large number of tables that supply data.

The book will be of considerable value to all who wish to examine the progress of pharmacy as a profession in terms of the psychologic factors involved.

Robbins concludes that the foundation of a profession is its essential social value, and that pharmacy's value will continue to be dependent on its practitioners' effective use and distribution of drug knowledge. "The evolution of pharmacy practice from the early function of manufacturing, through the stage of dispensing, to the present phase of providing consultation to patients, and the trend to territorial expansion into patient counseling in the future, indicates that pharmacy is a dynamic profession, constantly undergoing change and growth."

116. Romano, Joseph A., and Matthew B. Weiner. **Mill's Pharmacy State Board Review.** 30th ed. Garden City, NY: Medical Examination, 1983. 554p. \$19.95pa. ISBN 0-87488-430-6.

This is another publication designed to help the graduating pharmacy student prepare for the National Association of Boards of Pharmacy Examination (NABPLEX). The arrangement of the 1730 questions corresponds to the five sections of the NABPLEX examination—mathematics, pharmacology and clinical pharmacy,

pharmaceutical chemistry, pharmacy practice, and pharmacy law. An appendix is included that serves as a source of information.

117. Singer, Walter, Gary D. Hall, Thomas E. Platek, and Barry S. Reiss. **Pharmacy Review**. 3rd ed. Norwalk, CT: Appleton-Century-Crofts, 1985. 213p. bibliog. (Arco Medical Review Series). \$15.95pa. LC 84-12312. ISBN 0-8385-7840-3.

This is a comprehensive subject review intended to be used in preparation for pharmacy licensing examinations and for self-assessment of professional competency. It includes more than 1200 test questions (multiple choice and matching) with explained answers and a pretest and posttest. The subject areas covered are pharmaceutical chemistry, pharmacology, pharmaceutical calculations, pharmacy, biopharmaceutics and pharmacokinetics, and clinical pharmacy.

118. Study Commission on Pharmacy. **Pharmacists for the Future**. Report of the Study Commission on Pharmacy, commissioned by the American Association of Colleges of Pharmacy. Ann Arbor, MI: Health Administration Press, 1975. 161p. bibliog. \$6.00pa. LC 75-36707. ISBN 0-914904-14-0.

Although a large number of individuals prominent in the pharmacy field were involved in the development of this work, it is most often known as "The Millis Report," named for John S. Millis, chairman of the Study Commission. Millis was Chairman of the National Fund for Medical Education and Chancellor Emeritus at Case Western Reserve University at the time the report was prepared.

Millis says in the book's preface that pharmacy was not oblivious to the criticism and questioning of the health service system that was so evident in the United States during the period 10-15 years before the study was done. As a result, leaders in pharmacy education urged that an external examination of the state of the practice and education of pharmacists be undertaken. This book is the report of that examination. It was the commission's hope that their findings would help those interested to appreciate the complexities of the scene, understand what the future might bring, and suggest rational actions of benefit to pharmacy through improved education of its members, and ultimately help the people of the United States, as their health and well-being might be enhanced by better drug-related services.

The chapter headings are: (1) Introduction; (2) What is pharmacy?; (3) Who are the pharmacists?; (4) Pharmacy and the public interest; (5) Economics and the pharmacist; (6) Pharmacy's information system; (7) Forces of change in health services: implications for pharmacy; (8) Forces of change internal to pharmacy; (9) Pharmacists of the future; (10) The objectives of pharmacy education and the responsibilities of schools of pharmacy; (11) The content of pharmacy education; (12) The environment of pharmacy education; (13) Credentialing in pharmacy education; and (14) Summary of concepts, findings, and recommendations.

119. U.S. Department of Health and Human Services. **Characteristics of Pharmacists, United States**. By P. Hannah Davis and G. Gloria Kapantais. Washington, DC: Government Printing Office, 1984. 42p. bibliog. \$4.50pa. (Vital and Health Statistics, Series 14, Data from the National Health Survey, No. 28. DHHS Publication No. (PHS) 84-1823). LC 83-600193. ISBN 0-8406-0279-0. S/N 017-022-008335.

In this report demographic and employment characteristics of licensed pharmacists in 1978-79 are described. The first section of the report covers the supply of pharmacists, including the attraction of women and minorities into the profession, the employment setting, hours worked and services rendered, and the inactive pharmacist.

Much of the material is presented in tables. The next section presents 19 detailed tables. Appendices include technical notes on methods and a copy of the survey questionnaire.

The data on which this report is based were collected in two ways. First, the National Center for Health Statistics established the manpower component of the Cooperative Health Statistics System. This system was designed to decentralize the collection of data from the federal to the state level. The states were to report back to the federal component. The system was never fully developed to provide health manpower data in all states and was terminated after providing data for some states. The remaining states' data were collected via a contract with the American Association of Colleges of Pharmacy.

120. U.S. National Center for Health Statistics. **Data on Licensed Pharmacists.** Hyattsville, MD: U.S. Department of Health and Human Services, Public Health Services, Office of Health Research, Statistics and Technology, National Center for Health Statistics, 1981-. About 49 vols. bibliog. (DHHS Publication No. (PHS) 82-1153-1, etc.).

This set of state reports published by the National Center for Health Statistics contains data from the 1978-79 National Inventory of Pharmacists. The data collection period ranged from mid-1977 to mid-1980, with the majority occurring in 1978. All states for which data are available and the District of Columbia are included in the set, one separate publication for each state. Each report includes highlights and detailed tables. Appended are a copy of the questionnaire and information about methodology and data-processing procedures.

The tables include the following information: the number of active instate pharmacists by age and sex; number by race, Spanish origin, and sex; number by race, Spanish origin, and age; number by sex, principal form of employment, and age; number by sex, principal practice setting, and age; number by sex, hours worked per week, and age; number by pharmacy school granting first degree and principal practice setting; number by health service area and county of principal place of practice and age; number by health service area and county of principal place of practice and principal form of employment; and number of inactive instate pharmacists by health service area and county of mailing address and reason for inactivity.

121. Woodbury, Robert A., and Frank D. Sticht. **Medical Examination Review, Pharmacology.** 5th ed. Garden City, NY: Medical Examination, 1984. 297p. illus. bibliog. \$11.95pa. ISBN 0-87488-205-2.

This frequently revised work presents over 1000 multiple choice questions in the field of pharmacology to assist students in assessing their knowledge. The answers provided are explanatory. Use of such reviews can be an effective approach to studying special areas of the health science field.

122. Zachert, Martha Jane E., ed. **Standards and Planning Guide for Pharmacy Library Service.** Prepared for the Section of Librarians, American Association of Colleges of Pharmacy, by the Committee of Standards. Bethesda, MD: American Association of Colleges of Pharmacy, 1975. 89p. LC 75-30293.

This guide was prepared as an evaluative tool to help librarians in schools of pharmacy apply standards and do a self-evaluation of their libraries.

The first part of the guide, "Objectives and Standards for Pharmacy Library Service," includes sections on objectives, staff, collection, services, physical facilities, and budget. Standard specifications are appended.

The second part, the "Planning Guide," contains these sections: using the planning guide, context of pharmacy college library service, description of library characteristics, and a library profile.

7 Historical Works

Collected here are historical works of several kinds. The titles by Boussel, Kremers, La Wall, and Wootton (entries 125, 129, 130, and 135) are conventional histories. The works by Bindra, Nelson, and Sheehan (entries 124, 131, and 133) are concerned with the history of the pharmaceutical industry and drug discovery, important aspects of the subject. The title by Hamarneh (entry 128) on pharmacy museums and historical collections is worthy of attention because of its focus on objects and equipment from pharmacy's past, a matter of prevailing interest. Sonnedecker's contribution regarding the early years of federal food and drug control is important (entry 134). Dr. Sonnedecker is also responsible for the latest revision of Kremers' classic history (entry 129) and many more works on pharmacy's past.

Robinson's *Twentieth Century Druggist: Memoirs* (entry 132) is an example of an autobiographic work by a pharmacist. De Haen's book (entry 126) chronicles the development of new drugs during a productive period in pharmacy's history. Bardell's book (entry 123) is an account of an active state pharmaceutical association's accomplishments. Also included is one title covering the history and development of a school of pharmacy, Eckles' *Purdue Pharmacy: The First Century* (entry 127). A number of other schools also have published similar works (not reviewed here), including the schools at the universities of Texas, South Carolina, Minnesota, and Kentucky and the Philadelphia College of Pharmacy and Science.

123. Bardell, Eunice Bonow. **Wisconsin Show Globe: The Wisconsin Pharmaceutical Association, 1880-1980.** Madison, WI: Wisconsin Pharmaceutical Association, 1983. 294p. illus. bibliog. index. \$19.95. LC 83-051471.

Written by a professor emeritus at the University of Wisconsin-Milwaukee, this book is an account of the programs and activities of the Wisconsin Pharmaceutical

Association that influenced the practice of pharmacy in Wisconsin and the nation. It provides a perspective on the historical trends in American pharmacy at large. Among the accomplishments of the Association were the establishment of the School of Pharmacy at the University of Wisconsin, Madison, and the organization of the American Institute of the History of Pharmacy at the same institution. In addition, in 1898, when community pharmacists sought a national organization concerned with the business aspects of pharmacy, the Association was represented at the organizational meeting of the National Association of Retail Druggists.

Chapter headings are: (1) Shaping the Association (1875-1900); (2) The progressive era (1900-1917); (3) World War I and a foretaste of abundance (1917-1932); (4) The new era (1932-1941); (5) World War II and the expansion of the health sciences (1941-1958); and (6) Facing new challenges (1958-1980). A bibliography of historical articles published in the *Wisconsin Druggist* and the *Wisconsin Pharmacist* (1933-1980) is appended.

124. Bindra, Jasjit S., and Daniel Lednicer, eds. **Chronicles of Drug Discovery**. Volumes 1-2. New York: John Wiley and Sons, 1982-83. 2 vols. bibliog. index. \$34.95; \$44.95. LC 81-11471. ISBN 0-47-06516-1; 0-471-89135-5.

Two volumes have been completed in what the editors of this work hope will be a continuing series of volumes describing the development of new drugs. Because the process of such development is somewhat sporadic in nature, it is expected that future volumes will appear irregularly.

Volume 1 presents the stories of 12 drugs, each written by a person closely connected with the initial discovery. Only drugs developed in the past 15 years and currently marketed have been included. They cover a broad range of therapeutic areas.

Volume 2 presents 11 chapters, including the discovery of an antihypertensive agent, a central nervous system drug, five antibiotics, and one drug each for the treatment of helminthiasis and fungal infections. Also included are two cancer chemotherapeutic agents.

Some of the chapters describe the development of drugs based on carefully directed synthesis. Others describe discoveries made somewhat accidentally or haphazardly. The material of the volume is highly scientific and is most suitable for a research audience in the fields of medicinal and organic chemistry or pharmacology. However, the accounts are informal and candid and may interest the general scientific reader.

125. Boussel, Patrice, Henri Bonnemain, and Frank J. Bové. **History of Pharmacy and Pharmaceutical Industry**. Paris, Lausanne: Asklepios Press; distr., New York: Thieme-Stratton, 1983. 285p. illus. (part col.) bibliog. \$75.00. ISBN 2-88095-093-2.

This handsome work is in two main parts. The first was originally in French, but the second, on the pharmaceutical industry, was originally written in English. An earlier edition of the work did not include the second part.

The introduction points out that no longer is the history of pharmacy simply that of drugs. It now includes also the history of physical and natural science, medical principles, and techniques and instruments, as well as the people who chose and prepared the medicines, their relationships with the public, the related professions, the economy of a particular period and country, and history in general.

The first section, on prescience and the science of pharmacy, covers the great empires of Assyrie and Babylonie, Egypt, India, China, Persia, Israel, and the pre-Columbian. Then Greek, Roman, and Byzantine pharmacy, the beginnings of Western pharmaceutical arts, the Renaissance, the Arabs, and the great schools and the first

dispensaries in Western Europe (Salerno and Montpellier) are discussed. The second section, "The Apothecary," covers the fourteenth through eighteenth centuries. Part 3, "Modern Times," presents these sections: Impacts of two fateful centuries; Nineteenth century pharmacognosy; Development of the pharmaceutical industry; and Development of the pharmaceutical industry—America. The last section discusses great international companies, including Abbott, Bayer, Boehringer Ingelheim, Ciba Geigy, Eli Lilly and Co., Glaxo, Hoffman-LaRoche, Merck, Sandoz, Schering, Searle, Squibb, Upjohn, Wyeth, and Wellcome Foundation. A good deal of biography is included throughout.

The book is beautifully illustrated with many reproductions of woodcuts and photographs, some in color.

126. de Haen, Paul. **New Drug Parade: A Historical Minireview, 1954-1982.** Englewood, CO: Paul de Haen International, 1983. 36p. bibliog. \$25.00pa.

The source of the data presented in this publication is the annual review de Haen has made since 1954 of new drugs marketed. The material was presented as a poster exhibit at the 19th Annual Meeting of the Drug Information Association in Washington, DC, in 1983. It provides a historical review of a period when more drug development took place than at any other time in our history. Year by year the following information is provided: the number of products; number of companies involved; major new drugs with their manufacturers, use, chemical class, and foreign developers; and literature references.

The author then comments on what has been accomplished, including short discussions of significant new products, the percentage of American drugs compared with foreign, drugs withdrawn, the complexity of new drug submission requirements, and the notable growth of the drug industry.

127. Eckles, Robert B. **Purdue Pharmacy: The First Century.** West Lafayette, IN: Purdue University, 1979. 106p. illus. bibliog. index. \$10.00. LC 78-58099. ISBN 0-931682-01-0.

This is an account of the development and progress of the School of Pharmacy and Pharmacal Sciences at Purdue University. It tells how the school rose in prominence in education and research and also presents a history of personalities and practices. Written in popular style, it includes numerous photographs from the archives of the University. There are selections from personal interviews, professional journals, unpublished manuscripts, and administrators' correspondence.

Histories of other schools of pharmacy are available, most of them written in less popular style than this one.

128. Hamarneh, Sami K., and Ernst W. Stieb. **Pharmacy Museums and Historical Collections on Public View in the United States and Canada.** Madison, WI: American Institute of the History of Pharmacy in cooperation with the National Museum of American History, Smithsonian Institution, 1981. 144p. illus. bibliog. (Publication, American Institute of the History of Pharmacy, New Series, No. 6). LC 81-2168. ISBN 0-931292-09-3.

In the past 100 years, there has been a marked increase in interest in health museums in America, and many exhibitions of objects and equipment from pharmacy's past have been put on view. Included are reconstructions of apothecary shops that display period tools and utensils, pharmacy symbols, fixtures and equipment, and portraits and illustrations. This book, which is a revised edition of a 1972 publication,

Pharmacy Museums and Historical Collections on Public View, U.S.A., provides descriptions of pharmacy museums, apothecary shop restorations, and historical collections on public display.

The book is made up of the following sections: (1) Pharmacy museums and exhibitions in the United States listed by state and subdivided by city; (2) Pharmacy museums and exhibitions in Canada, arranged alphabetically by province and subdivided according to city; (3) American pharmacy's historical markers, an annotated list; (4) Concluding remarks; and (5) A bibliographic guide, partly annotated, covering topics, related by museology and to the history of pharmacy, its tools, and related arts and antiques.

Each entry in Parts 1 and 2 provides the following: name, address, phone number, ownership, curator's name, hours, admissions fees, information about tours, and a description. The book contains many nice photographs.

129. Kremers, Edward, and George Urdang. **Kremers and Urdang's History of Pharmacy**. 4th ed. revised by Glenn Sonnedeker. Philadelphia, PA: J. B. Lippincott, 1976. 571p. illus. bibliog. index. \$28.50. LC 75-40104. ISBN 0-397-52074-3.

This classic work has traditionally been used as a textbook by pharmacy students and as a reference work in the history of pharmacy. The growth and development of pharmacy from ancient Egypt to the present in the United States is traced to form an integrated view of the subject. An important antecedent in the development of modern pharmacy was the early use by man of natural resources as "drugs" to fend off disease. In addition, "supernatural" countermeasures were needed. The book considers these matters in the early chapters.

The work is in four parts: (1) Pharmacy's early antecedents; (2) The rise of professional pharmacy in representative countries of Europe; (3) Pharmacy in the United States; and (4) Discoveries and other contributions to society by pharmacists.

There are discussions of Babylonian, Assyrian, Egyptian, Greek, and Roman contributions to medicine. Early literature is covered in these sections. The evolution of plant drugs to chemical drugs is taken up. There is a section on the search of the flora of the New World for aromatics, spices, and medicinal plants. Important ones discovered include curare, tobacco, coca, and cinchona.

There is an excellent appended section on early pharmaceutical literature with references to herbals, pharmacopeias, formularies, and other materials. In addition, there is a glossary and a list of representative drugs of the American Indians. Illustrations are well selected and include photographs or works of art dating back several centuries.

130. La Wall, Charles H. **Four Thousand Years of Pharmacy: An Outline History of Pharmacy and the Allied Sciences**. Philadelphia, PA: J. B. Lippincott, 1927. 665p. illus. bibliog. index.

In addition to discussing the history of pharmacy, this classic work also covers some of the history of general science, details about the professions, arts, and sciences related to pharmacy, and concurrent events in general history.

These are the chapter titles: (1) Ancient pharmacy and its earliest sideline—medicine. Science in embryo; (2) Pharmacy during the Greek, Alexandrian, and Roman periods. The kindergarten of science; (3) The Arabians preserve the pharmaceutic art and carry the torch of professional and scientific knowledge from the sixth to the thirteenth centuries; (4) Medieval pharmacy. The origin of universities. The influence of the Crusades on pharmacy; (5) Medieval pharmacy and alchemy from the

time of Roger Bacon to the fifteenth century; (6) Pharmacy during the famous fifteenth century. A century of alchemistic frenzy. Beginning of the Renaissance; (7) The glorious science; (8) The century of famous pharmacopoeias and notable characters. The golden seventeenth; (9) The progressive eighteenth century. Pharmacy ascendent. The birth of chemistry. The beginnings of modern science; (10) The recent nineteenth century. The development of pharmacy in America; (11) The present twentieth century. Whose history cannot yet be written.

Also included are a bibliography of ten pages, a chronological table of important events in pharmacy, and 64 illustrations from original sources, mostly taken from pages of books in the author's library.

131. Nelson, Gary L., ed. **Pharmaceutical Company Histories**. Bismarck, ND: Woodbine Publishing (Box 1704, Bismarck, ND 58502), 1983-. illus. index. \$15.00 (vol. 1) pa. ISBN 0-912067-02-0 (vol. 1); 0-912067-01-2 (the set).

The first volume of this series presents the histories of thirteen pharmaceutical companies from the early days until recent times. It provides a behind-the-scenes view of drug discovery, research and development, and a readable story about each company. The aim is to familiarize pharmacists, sales and marketing personnel, students and educators, and other interested individuals with the historical aspects of the pharmaceutical industry. Background information on a number of drugs has been included.

The companies featured are: (1) Ayerst Laboratories; (2) Burroughs Wellcome Company; (3) Central Pharmaceuticals, Inc.; (4) Hoechst-Roussel Pharmaceuticals, Inc.; (5) Eli Lilly and Company; (6) Merck Sharp & Dohme; (7) Miles Laboratories; (8) Norwich-Eaton Pharmaceuticals; (9) Reed & Carnrick; (10) A. H. Robins Company; (11) Schering-Plough Corporation; (12) Smith Kline Beckman Corporation; and (13) Walker, Corp. & Company, Inc.

132. Robinson, Charles W. **Twentieth Century Druggist: Memoirs**. Beverly, North Hunberside, UK: Galen Press, 1983. 244p. illus. index. \$12.00pa. ISBN 0-950-872601.

An autobiography of a British pharmacist born in 1911, this is a delightful account of the author's professional life interwoven with other impressions of the era. Robinson says the middle years of this century saw a shift away from the time-honored medicines of his youth, some of which had changed little in the 1700 years since the great pharmacist-physician Galen, to the modern products of pharmacologic research. He reflects on this revolution as seen through his work in pharmacy and the pharmaceutical industry. There are glimpses of the industry in prewar Germany under the Nazis, in wartime Australia, and in a struggling postwar Britain.

Robinson's rigorous apprenticeship is recounted. He began his professional life as an editorial assistant on the *Pharmaceutical Journal* (see entry 891). Robinson next joined the Bayer Company in Germany, but his stay there was short because of his strong anti-Nazi views. He continued with the Bayer Company in Australia. On his return to Britain he became involved in pharmaceutical associations, and in midcareer he became involved with developing a New Town under the New Town Act.

The book is illustrated with many photographs, some of them of outstanding pharmaceutical personalities who are discussed in the text.

It's a nice book, well written, and revealing of Robinson's personality and character, as well as the time in which he lived.

133. Sheehan, John C. **The Enchanted Ring: The Untold Story of Penicillin**. Cambridge, MA: MIT Press, 1982. 224p. bibliog. index. \$15.00. LC 82-2093. ISBN 0-262-19204-7.

This is a highly personal, well-documented account of the development of penicillin, with a description of the personalities, institutions, and governments involved in its discovery and development. The continuing controversy over who did what first is told. In the first chapter, "The Lonely Search," Sheehan tells why he undertook to synthesize penicillin after extensive efforts of other scientists had failed. He also gives his view of the contribution the United States made in early work on the drug, although a general impression had been held that the British scientists deserve full credit for initial insights.

The next chapter provides the early history of penicillin. An account is given of the Cocoanut Grove fire of 1942, when treatment of burn victims from the fire put the drug in public view. Chapter 3, "Developing the Secret Weapon," tells of the failure of the Germans in World War II to develop a penicillin industry, evidently because they felt sulfa would be the drug of choice. Chapter 4, "The Impossible Dream," tells of the author's problems in synthesizing the drug with strong wills in conflict over the correct approach to take. The next chapter, "The Conquest of Penicillin," describes Sheehan's success. The last chapter, "Ordinary Skill in the Art," is about Sheehan's successful 23-year struggle over patent rights. The author's epilogue ends with the comment that penicillin research is more active now than ever because new techniques and instruments are being applied to other drugs of the beta-lactam family of antibiotics. "The more we work on those compounds, the more obvious it becomes that we have only begun to realize the powers locked in that enchanted ring."

The book has been recommended especially for those who wish to hear an American organic chemist's story of a great scientific discovery.

134. Sonnedecker, Glenn, ed. **The Early Years of Federal Food and Drug Control**. James Harvey Young, Chairman of the Symposium Commemorating the 75th Anniversary of the First Federal Food and Drug Law of 1906. Madison, WI: American Institute of the History of Pharmacy with the cooperation of the American Pharmaceutical Association, 1982. 60p. bibliog. (Publication No. 7, new series). \$4.90pa.

Presented here are the scholarly papers of a symposium celebrating the 75th anniversary of the Food and Drug Act of 1906. Together they provide a history of the development of federal controls on food and drugs.

Authors and titles of the contributions are: (1) Introduction by James Harvey Young; (2) The Biologics Control Act of 1902 by Ramunas A. Kondratas; (3) Drug Standards Become Official by Glenn Sonnedecker; (4) Food Controls Under the 1906 Act by Aaron J. Ihde; (5) Remarks introducing Jere Goyan by William S. Apple; and (6) FDA at 75—Failure, Symbiosis, Convergence by Jere E. Goyan.

135. Wootton, A. C. **Chronicles of Pharmacy**. London: Macmillan, 1910; repr. Boston, MA: Milford House for USV Pharmaceutical Corp., 1972. 2 vols. illus. index. LC 72-77662.

This work was difficult to obtain until a special facsimile edition was made available by the USV Pharmaceutical Corporation. The preface identifies pharmacy as the art of selecting, extracting, preparing, and compounding medicines from vegetable, animal, and mineral substances. Pharmacy is said to be almost as ancient as man. The author's view is that the manipulation of drugs has through the ages been "associated

with magic, with theology, with alchemy, with crimes and conscious frauds, with the strangest fancies, and dogmas, and delusions, and with the severest science." He further states that "dieties, kings, and quacks, philosophers, priests, and poisoners, dreamers, seers, and scientific chemists have all helped to build the fabric of pharmacy." Their work is sketched in the chronicles presented in this fascinating work. In addition, formulas and directions for making old medicines are provided.

Chapter titles are: (1) Myths of pharmacy; (2) Pharmacy in the time of the Pharaohs; (3) Pharmacy in the Bible; (4) The pharmacy of Hippocrates; (5) From Hippocrates to Galen; (6) Arab pharmacy; (7) From the Arabs to the Europeans; (8) Pharmacy in Great Britain; (9) Magic and medicine; (10) Dogmas and delusions; (11) Masters in pharmacy; (12) Royal and noble pharmacists; (13) Chemical contributions to pharmacy; (14) Medicines from the metals; (15) Animals in pharmacy; (16) Reminiscences of ancient pharmacy; (17) Pharmacopoeias; (18) Shakespeare's pharmacy; (19) Some noted drugs; (20) Familiar medicines and some notes on their histories; (21) Noted nostrums; (22) Poisons in history; (23) Pharmacy in the nineteenth century; and (24) Names and symbols.

The last chapter is a useful glossary of technical terms limited to names of pharmaceutical processes, products, and applications. Many of the terms were obsolete even in 1910, but they have been included because they are found in old treatises. Apothecaries' weights and measures signs are defined.

8 Dictionaries and Encyclopedias

Listed in this section are dictionaries and encyclopedias covering various aspects of the pharmaceutical field.

There are several titles that deal with terminology. These include those dealing with drugs of abuse such as the two titles by Abel (entries 136 and 137), the *Multilingual Dictionary of Narcotic Drugs and Psychotropic Substances Under International Control* (entry 155), and the U.S. National Institute on Drug Abuse's *Guide to Drug Abuse Research Terminology* (entry 161). There is no general English language work available covering the field. However, there are several foreign language works listed, including Bunjes's *Medical and Pharmaceutical Dictionary* (entry 138), the two titles by Carrière (entries 140 and 141), *Lexicum Pharmaceuticum* (entry 152), two titles by Sliosberg (entries 157 and 158), *Steinbichler's Lexicon für die Apothekenpraxis in sieben Sprachen* (entry 159), and Steinmetz's *Codex Vegetabilis* (entry 160). The title by Davis (entry 143) deals with abbreviations. The *CTFA Cosmetic Ingredient Dictionary* (entry 139) and Winter's *A Consumer's Dictionary of Cosmetic Ingredients* (entry 164) identify materials used in cosmetics.

Included are a number of dictionaries or encyclopedias that deal with plants. Most of those listed emphasize medicinal plants. They include Hocking's *Dictionary of Terms in Pharmacognosy* (entry 150), Steinmetz's *Codex Vegetabilis* (entry 160), Uphof's *Dictionary of Economic Plants* (entry 162), Usher's *Dictionary of Plants Used by Man* (entry 163), and Wren's *Potter's New Cyclopaedia of Botanical Drugs and Preparations* (entry 165).

Chemical dictionaries have been listed if they include a large percentage of materials of interest in the pharmaceutical field. Such titles include Considine's *Van Nostrand Reinhold Encyclopedia of Chemistry* (entry 142), *Hackh's Chemical Dictionary* (entry 148), *Merck Index* (entry 154), Gardner's *Chemical Synonyms and Trade Names* (entry 144), and Hawley's *Condensed Chemical Dictionary* (entry 149).

For the most part, books that list drugs are included in the section called "Drug Compendia" (chapter 11). However, there are a few titles somewhat related to those

that are listed here. Included are Glasby's three encyclopedias covering antibiotics, alkaloids, and the terpenoids (entries 145-147), Leung's *Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics* (entry 151), and Maimonides's *Glossary of Drug Names* (entry 153), which lists ancient names. Sittig's *Pharmaceutical Manufacturing Encyclopedia* (entry 156) provides details for the manufacture of some major drugs.

136. Abel, Ernest L. **A Dictionary of Drug Abuse Terms and Terminology.** Westport, CT: Greenwood Press, 1984. 187p. bibliog. \$29.95. LC 83-22867. ISBN 0-313-24095-7.

Listed in this dictionary are words and expressions that deal with drugs of abuse, including some formal and technical terms used in the field. Many of the terms relating to marijuana have been adopted from the author's *A Marihuana Dictionary* (see entry 137). The present book covers the entire drug abuse field except that it includes little about alcohol or tobacco. Because the slang and street language of the drug culture changes rapidly, the dictionary is not exhaustive. The lingo changes as the public becomes aware of the terms. The members of the drug culture hide behind their special lingo, and it also serves to foster group solidarity.

About 3000 terms are listed alphabetically with brief definitions of a line or two. The origin of the terms is not provided because the author feels that the etymology of most drug abuse terminology has been lost and is almost impossible to determine. The book includes a glossary that rearranges the terms. The conventional words are listed alphabetically with a number of corresponding slang or street terms following.

The dictionary should be of value to sociologists, psychologists, lawyers, law enforcement officers, and those in the helping professions.

137. Abel, Ernest L. **A Marihuana Dictionary: Words, Terms, Events, and Persons Relating to Cannabis.** Westport, CT: Greenwood Press, 1982. 136p. bibliog. index. \$29.95. LC 81-13427. ISBN 0-313-23252-0.

Marijuana was introduced to Americans about 1900 by Mexican workers who carried it across the border. Before then the plant was known as hemp in the United States and was valued only as a source of fiber. By the 1960s, use of the plant as a drug of abuse spread to middle-class young Americans, although it was and still is illegal. Marijuana users have developed a special lingo and argot as a means of fostering group solidarity. The compiler of this dictionary points out that like all slang, marijuana lingo is constantly changing. A core of terms has remained, however, and these terms are the main subject matter of this compilation.

Abel has provided a rather comprehensive list of words and phrases. Their derivation is included when known, with citations to earliest use in popular media. Also included are terms referring to hemp that were once used but are now obsolete. Individuals concerned with the history of marijuana are listed, as are events related to the subject. Terms related to the pharmacologic and botanic properties of the plant are also included. A short appendix of foreign language terms is provided. The bibliography lists sources referred to in the definitions.

Abel is well qualified to write a dictionary such as this, and it is an interesting and valuable contribution to the literature of drug abuse.

138. Bunjes, Werner E. **Medical and Pharmaceutical Dictionary.** English-German. 4th ed. with a supplement comprising more than 17,000 new entries. New York:

Thieme-Stratton, and Stuttgart: Georg Thieme Verlag, 1981. 696p. \$65.00. ISBN 0-86577-025-7; 3-13-370604-7 (Georg Thieme Verlag).

A companion volume to this work, the German-English volume, entitled *Wörterbuch der Medizin und Pharmazeutik*, is in the third edition and is available from the publishers for the same price. The volume under review is essentially the third edition also, except that a separately paged supplement adds new terms. The organization of the dictionary is the traditional one, an alphabetical listing of the terms.

Special features of the work include translation and grammar hints, pronunciation, abbreviations, and conversion factors.

139. **CFTA Cosmetic Ingredient Dictionary**. 3rd ed. Edited by Norman F. Estrin, Patricia A. Crosley, and Charles R. Haynes. Washington, DC: The Cosmetic, Toiletry and Fragrance Association (1110 Vermont Ave., NW, Suite 800, Washington, DC 20005), 1982. 610p. illus. index. \$150.00. LC 81-71844.

This is a computer-generated work that provides the cosmetic industry, medical profession, and government agencies with comprehensive information on cosmetic ingredients. The main section presents 3400 entries arranged alphabetically by CTFA adopted names. Included in the entries are definitions, chemical structures, sources of information, chemical and trade names, and the Chemical Abstracts Service registry number.

Also included are a chemical/trade name list that indicates the CTFA adopted name, a supplier index, a list of Chemical Abstracts Registry numbers and recognized disclosure numbers, and a tabulation of cosmetic raw material composition statement numbers.

140. Carrière, G. **Dictionary of Surface Active Agents, Cosmetics and Toiletries: English, French, German, Spanish, Italian, Dutch, Polish**. Amsterdam, The Netherlands: Elsevier Scientific Publishing, 1978. 198p. index. LC 77-8552. ISBN 0-444-99809-8.

Carrière's 1966 lexicon (see entry 141) is similar to this work, but the latter does not cover nearly so many languages. It covers just the principal ones, as listed above.

First, a "Basic Table" is presented, with terms arranged alphabetically in the English language with the corresponding terms in other languages beneath. Then, the "Indexes" are presented, one for each language, with references back to the Basic Table, which indicates equivalent terms in other languages.

141. Carrière, G. **Elsevier's Lexicon of Detergents, Cosmetics and Toiletries**. Amsterdam, The Netherlands: Elsevier Scientific Publishing, 1966. 203p. (Elsevier Lexica). LC 66-16717.

Limited versions of this lexicon, in a few languages only, were published before this work was compiled. Its aim is to fix the equivalents of the technical terms and phrases in a number of languages using, to a certain extent, the work done by various national commissions.

Part I of the book covers detergents, Part II cosmetics and toiletries. The lexicon of detergents includes these languages: English, French, Spanish, Finnish, Czech, Hungarian, Romanian, Greek, Turkish, Japanese, Italian, Portuguese, German, Dutch, Swedish, Danish, Norwegian, Russian, and Polish. The lexicon of cosmetics and toiletries includes English, French, Spanish, Italian, Portuguese, German, Dutch, and Swedish.

Each part of the work is arranged so that terms in all languages are listed in subject categories, such as washing agents, textiles, skin, bleaching, and so on, then the vocabulary in the various languages is listed alphabetically in another section with references back to the first listing.

142. Considine, Douglas M., ed. **Van Nostrand Reinhold Encyclopedia of Chemistry**. 4th ed. New York: Van Nostrand Reinhold, 1984. 1082p. index. \$89.50. LC 83-23336. ISBN 0-442-22572-5.

The first edition of this encyclopedia appeared in 1956. Subsequent editions have been larger and, the latest one especially, much more interdisciplinary in character.

There about 1300 alphabetically arranged entries presented, each prepared by an expert. The material is of a level suitable for a reader with a general background in chemistry. Because many of the articles are rather general, a detailed subject index has been provided. Major articles are followed by bibliographic references.

Because the influence of chemistry is so great on many modern sciences and technologies, areas such as the following are dealt with in addition to the ones traditionally covered in chemical encyclopedias: advanced processes; strategic raw materials; chemistry of metals; energy sources and conversion; wastes and pollution; growing use of food chemicals; structure of matter; new and improved materials; plant chemistry; and biochemistry and biotechnology.

In view of the foregoing, the book is of considerable value to technologists, educators, and students in a wide range of pursuits. These fields include the biosciences; earth and atmospheric sciences; the medical, drug, and plant sciences; the materials and engineering sciences; and physics.

143. Davis, Neil M. **Medical Abbreviations: 2300 Conveniences at the Expense of Communications and Safety**. 2nd ed. Huntingdon Valley, PA: Neil M. Davis Associates (1143 Wright Drive, Huntingdon Valley, PA 19006), 1984. 62p. bibliog. \$3.25pa. ISBN 0-931431-02-6.

Compiled by a professor of pharmacy, this booklet is intended to assist individuals in reading medical records and prescriptions. The author's view is that although abbreviations are a convenience, a price is paid for their use. They are sometimes not understood or are interpreted incorrectly, and many have several meanings. Listed alphabetically in this work are a limited number (2300) of abbreviations and some of their possible meanings. The author says an examination of the list is a testimonial to the problems and dangers associated with most undefined abbreviations.

144. Gardner, William. **Chemical Synonyms and Trade Names: A Dictionary and Commercial Handbook Containing Over 35,500 Definitions**. 8th ed. revised and enlarged by Edward I. Cooke and Richard W. I. Cooke. Oxford, England: Technical Press, 1978. 769p. \$75.00. LC 77-85232. ISBN 0-291-39678-X.

This dictionary identifies and briefly defines chemical terms and proprietary trade names used internationally. This edition has added many terms of the pharmaceutical field.

The work is arranged alphabetically with adequate cross-references provided. Many of the definitions include a number in brackets that refers to the list of manufacturers appended, providing in this fashion information on what company makes the product. Addresses are not given with the company names.

145. Glasby, John S. **Encyclopaedia of Antibiotics**. 2nd ed. New York: John Wiley and Sons, 1979. 467p. (Wiley-Interscience Publication). \$60.00. LC 78-13356. ISBN 0-471-99722-6.

The first edition of this encyclopedia appeared in 1977. Since that time a large number of new antibiotics have been described in the scientific literature, and over 400 of these have been added to the second edition. In addition, the structures of several of the substances previously described have been revised in light of more recent investigations, particularly into their stereochemistry.

The format of the second edition is similar to that of the first. The arrangement is alphabetical. For each antibiotic the formula, structure, melting point, elaborating organism, methods of preparation and purification, those organisms against which the antibiotic is effective, toxicity, and literature and/or patent reference are given.

The work is of particular value for workers in the fields of medicine, pharmacology, microbiology, chemistry, and biochemistry.

146. Glasby, John S. **Encyclopedia of the Alkaloids**. New York: Plenum Publishing, 1975-. About \$65.00 per volume. LC 75-17753. ISBN 0-306-30845-2 (volume 1).

Plant alkaloids are important because their marked physiologic action makes them valuable in medicine. They also often have toxic properties. This encyclopedia began as a two-volume work, but to date two more volumes have been added to it to keep the work current. New alkaloids are discovered in increasing numbers each year. Covered are occurrence, structures, physiologic properties, synthesis, and biosynthesis.

The alkaloids are listed alphabetically. Each entry usually includes molecular formula, description, melting point, and literature references.

147. Glasby, John S. **Encyclopaedia of the Terpenoids**. New York: John Wiley and Sons, 1982. 2 vols. bibliog. index. \$530.00. LC 81-19866. ISBN 0-471-27896 (the set).

According to the preface of this voluminous work, the terpenoids are perhaps the most numerous and varied class of organic compounds found in nature, embracing a wide range of substances. Many find use as perfumes, whereas others are important as antibiotics, cytotoxic agents, and antifeedants. Most are found in plants. This encyclopedia covers the literature to the end of 1979, and whenever possible, the original papers have been consulted for the relevant data.

There is little or no introductory material presented in the work. The compounds are listed alphabetically by common name. More than 10,000 compounds are included. A molecular formula index and a classification index are included. Information given about each compound includes structural diagram; physical data; plant or organism source; derivatives that have been prepared to characterize the compound; medicinal or other uses; toxicity (where known); and references to the original literature. Cross-references are provided where appropriate.

The work is most useful to researchers in the medical field, biochemists, and organic research chemists. It is timely because Devon and Scott's *Handbook of Naturally Occurring Compounds* (see entry 210) covers the literature only up to 1971. However, it appears that the work in progress by Dev, et al., *CRC Handbook of Terpenoids* (see entry 209) will provide much the same coverage.

148. **Hackh's Chemical Dictionary: American and British Usage**. 4th ed. Revised and edited by Julius Grant. New York: McGraw-Hill, 1969. 738p. \$64.25. LC 61-18726. ISBN 0-07-024064-7.

This recent edition of an excellent old classic bears the subtitle: "Containing the Words Generally Used in Chemistry, and Many of the Terms Used in the Related Sciences of Physics, Astrophysics, Mineralogy, Pharmacy, Agriculture, Biology, Medicine, Engineering, etc. Based on Recent Chemical Literature." About 55,000 words are defined, usually in brief and concise style.

Geared to the needs of the working chemist, the dictionary basically does the following: (1) States important theories, laws, and rules; (2) Lists and describes the elements, important compounds, minerals, drugs, and vegetable and animal products; (3) Covers significant reactions, processes, and methods; (4) Describes chemical apparatus and instruments; (5) Includes vocabulary of other scientific fields and terms of industry, mining, and commerce. Product names listed have been given an initial capital letter and indicated as trademarks. All terms given in the *United States Pharmacopeia* and the *British Pharmacopoeia* (see entries 98 and 94) current at the time the dictionary was written are included and indicated as "U.S.P." or "B.P.," respectively.

149. Hawley, Gessner G. **The Condensed Chemical Dictionary**. 10th ed. New York: Van Nostrand Reinhold, 1981. 1135p. \$55.00. LC 80-29636. ISBN 0-442-23244-6.

The main purpose of this well-liked dictionary is to provide information on hundreds of chemicals, chemical phenomena, and some short biographic sketches of prominent chemists. It is perhaps of most value to pharmaceutical scientists for other reasons, however. Possible health hazards posed by many compounds are indicated. Also of considerable interest are the large number of trade name products listed. The trade names are given in the alphabetical listing in quotation marks with a number supplied that refers to a manufacturers' list in the back of the volume, thus providing supplier information.

A typical entry gives the chemical's common name followed by synonyms and molecular formula. A few structural formulas are included. Physical properties, uses, and shipping information are given. Appended materials include a section on the origin of some chemical terms, the numerical list of manufacturers of trademarked products, and an alphabetical list of the manufacturers with addresses.

150. Hocking, George MacDonald. **A Dictionary of Terms in Pharmacognosy and Other Divisions of Economic Botany**. Springfield, IL: Charles C. Thomas, 1955. 284p. illus. bibliog. LC 55-7453.

The title page says this is "a compilation of words and expressions relating principally to natural medicinal and pharmaceutical materials and the plants and animals from which they are derived, their chemical composition, applications, and uses, together with some other materials derived from the plant, animal, and mineral kingdoms of current economic interest." The author defines pharmacognosy as "the science which treats in detail those medicinal and related products of crude or primary type obtained from the vegetable, animal, and mineral kingdoms as they appear on the market as raw materials, as they occur in folk medical practice, and as they function in chemical manufacturing processes." Professor Hocking hopes his work will be appreciated as a guide through the maze of innumerable Latin terms, biologic names, vernacular terms, and other specialized jargons.

At the time the dictionary was compiled, herbal medicine had suffered a decline in usage, at least in the form usually identified as "herbal," although a large number of drugs, then as now, were derived from plant substances. The dictionary was designed primarily for students and practitioners in the health professions, people in trade and

industry, and others interested in the useful plants of the world. Many will find it valuable because of the current resurgence of interest in the field.

An explanatory foreword covers definitions, nomenclature, pronunciation, geographic distribution, constituents, and applications and uses of the materials. Other supplementary sections include lists of abbreviations, symbols, references, serials and periodicals, terms describing properties and therapeutic uses of drugs, and material on classification of plants and animals.

151. Leung, Albert Y. **Encyclopedia of Common Natural Ingredients Used in Food, Drugs, and Cosmetics**. New York: John Wiley and Sons, 1980. 409p. bibliog. index. (A Wiley-Interscience Publication). \$50.00. LC 79-25998. ISBN 0-471-04954-9.

This is a unique book of high quality. The author was educated as a pharmacist and pharmacognosist and has had extensive experience in industries that deal with natural products. According to the preface, about 500 natural ingredients are currently used in commercial food, drugs, and cosmetic products (not including such materials as vitamins and antibiotics). The book contains information on about 310 of these ingredients used in processed foods, over-the-counter drugs, and cosmetics. Many substances are covered that were formerly official in the *United States Pharmacopeia and National Formulary* (entry 98), but have been deleted from recent editions (although still used). It is particularly difficult to find up-to-date information on such preparations, and, of course, many products are included that were never official but have been and still are used.

The natural products are arranged alphabetically by the most common name, with each natural ingredient cross-referenced by its scientific and other synonymous names in the general index. There is also a separate chemical index. Information included on each item includes plant or other sources, habitats, parts used or derived from, method of preparation, brief physical description, chemical composition, pharmacologic or biologic activities, and common commercially available forms and their qualities, uses, and regulatory status, if any. Uses are categorized as pharmaceutic and/or cosmetic, food, folk medicine, and others. The author has provided a glossary of terminology commonly used in the botanic industry. References to scientific literature are provided with each monograph.

The encyclopedia is intended primarily for technical and nontechnical members of the food, drug, and cosmetic industries, teachers and students of related sciences, and members of the general public who are interested. The author says he has reported only those folk medicinal uses that are known to him from reliable sources; they are by no means complete or an endorsement of such use, he notes. He has included them because of their popular interest.

152. **Lexicum Pharmaceuticum: Principal Pharmaceutical Terms in Five Languages**. Strasbourg, France: Conseil de l'Europe, 1967. 129p.

The languages included in the polyglot lexicon are German, English, French, Italian, and Dutch. German is the basic language. To use the book, the user looks for the term to be translated in the alphabetical list of the corresponding language. For the German list, the translation into the other languages is found after each term. For the other languages, the user must make note of the reference number given the term in question, and then look in the basic (German) list to see the corresponding terms in the other languages. Instructions for use of the book appear in all the languages.

The lexicon is easy to use; the English language user is not handicapped by the fact that the basic list is the German one. There are 1144 terms included.

153. Maimonides, Moses. **Moses Maimonides' Glossary of Drug Names.** Edited by Fred Rosner. Translated from Max Meyerhof's French edition. Philadelphia, PA: American Philosophical Society, 1979. 364p. index. (Memoirs of the American Philosophical Society, Volume 135). \$20.75pa. LC 79-13875. ISBN 0-87169-135-3; ISSN 0065-9738.

This work is one of a group of medical writings by Maimonides, a noted Jewish physician born in Spain in the twelfth century who later settled in North Africa and attended royal families. His works were originally written in Arabic. The *Glossary of Drug Names* was only relatively recently discovered in a library in Istanbul, Turkey, and was subsequently translated into French (1940). A Hebrew edition has also appeared (1969). The work under review has been translated from the French edition.

The book is essentially a pharmacopeia. Its 405 short monographs are arranged alphabetically by what was considered the best-known name of the drug. The name is usually Arabic (although it may be of Greek, Syrian, or Persian origin); after that are other Arabic and Syriac names and then names in Greek, Persian, Berber, Spanish, and English. Explanatory material is given on each drug, averaging about one-half page in length. Many references to early writing about the substances are included. Indices of Latin, Iberian, Accadian and Syrian, Arabic, Berber, Sanscrit, and Indian dialects and Persian names have been provided.

The translation is a very scholarly undertaking and should be an important source for medical historians and Judaic scholars, as well as for pharmaceutical scientists.

154. **The Merck Index: An Encyclopedia of Chemicals, Drugs, and Biologicals.** Edited by Martha Windholz. 10th ed. Rahway, NJ: Merck & Co., 1983. 2052p. index. \$28.50. LC 83-61075. ISBN 911910-27-1.

First published 94 years ago as a company catalog, the *Merck Index* has evolved into a detailed, concise reference work, probably the most widely used publication of its kind in the world. It contains short descriptive monographs on 10,000 substances. The monograph section makes up the largest section of the work, but about one third of the book is devoted to other materials, including organic name reactions, miscellaneous tables, *Chemical Abstracts* names and registry numbers for title compounds, a formula index, a cross-index of names, and titles of deleted ninth edition monographs.

In the monographs section, the substances are alphabetically arranged with the following information usually provided: other names; molecular weight and other physical data; composition; derivatives; method of preparation in brief; description; and literature references. More than half the monographs are illustrated with stereochemical structures and include information on metabolism, pharmacology, and toxicology.

This valuable publication is used by chemists, pharmacists, toxicologists, physicians, biologists, chemical engineers, botanists, veterinarians, physicists, and students in these disciplines.

Recently the material in this publication has also become available on an online database that is updated every six months.

155. **Multilingual Dictionary of Narcotic Drugs and Psychotropic Substances Under International Control.** New York: United Nations, 1983. 347p. bibliog. £33.30. Sales number: E/F/R/S 83.XI.5.

Forerunners of this list were published in 1958, 1963, and 1968. The work has been prepared as a reference book, listing names for drugs that are under international control in a number of languages. Part 1 of the dictionary consists of monographs on

the substances arranged in English alphabetical order according to the international nonproprietary name. Each monograph includes nature of the substance, molecular formula, molecular weight, structural formula, systematic chemical name, theoretical percentage of the anhydrous basic substance, the regimen of control applicable to the substance according to the conventions on narcotic drugs and psychotropic substances, other chemical names and variants, common generic and trade names, code designations that have appeared in the literature, names of pharmaceutical preparations, and some street names of abused drugs. In general, however, slang names and colloquialisms have not been included. Where appropriate, information on the salts of the substance that have been used is included. Part 2 is an alphabetical cross-index of all the names included in the monographs.

The title of the book is given in English, Arabic, Chinese, French, Russian, and Spanish, and the text material also appears in several languages. The dictionary does not include names in Arabic and Chinese in Parts 1 and 2. However, the principal names of the drugs in Arabic and Chinese in addition to Russian are listed in appendices.

156. Sittig, Marshall. **Pharmaceutical Manufacturing Encyclopedia**. Park Ridge, NJ: Noyes Data Corporation, 1979. 702p. bibliog. index. (Chemical Technology Review No. 124). \$72.00. LC 79-63053. ISBN 0-8155-0739-9.

Based on patent literature, this book gives details for the manufacture of 673 major pharmaceuticals. Emphasis is on the practical synthesis of the drugs. The information is presented in monographs about a page in length arranged alphabetically by generic name of the pharmaceutical. There are indexes by trademarks and trade names and by raw materials.

The following information is usually given in each monograph: therapeutic function, chemical name, common name, structural formula, trade name, manufacturer, country, year of introduction, method of manufacture, and literature references.

The work is particularly valuable for suppliers to the pharmaceutical industry.

157. Sliosberg, A., comp. **Elsevier's Dictionary of Pharmaceutical Science and Techniques in Five Languages: English—French—Italian—Spanish—German. Volume 1: Pharmaceutical Technology**. New York: Elsevier, 1968. bibliog. 686p. \$138.25. LC 67-25752. ISBN 0-444-40544-5.

There is no other specialized dictionary that covers pharmaceutical technology. This one, a polyglot type, includes about 10,000 terms from science (chemistry, general physics, mathematics, biology, and so on), technology, economics, and commerce. It is intended for technicians, research workers, analysts, pharmaceutical specialists, pharmacologists, and technical translators who need to consult foreign publications.

The main section of the book, the "Basic Table," lists 7507 English language terms alphabetically with the corresponding terms given in the other four languages. There are four thumb-indexed sections, one for each of the languages other than English, where the terms are listed alphabetically with the number given that corresponds to the entry in the basic table.

158. Sliosberg, A., comp. **Elsevier's Dictionary of Pharmaceutical Science and Techniques in Six Languages: English—French—Italian—Spanish—German—Latin. Volume 2: Materia Medica**. New York: Elsevier, 1980. 552p. \$138.25. ISBN 0-444-41664-1.

The first volume of this set, which was published a number of years earlier (1968), covered pharmaceutical technology (see entry 157). This one is limited to terms in the

area of *materia medica*, especially substances of vegetable and animal origin used in the preparation of drugs. It is a polyglot dictionary providing like terms in the six languages indicated above.

The main section of the work, the "Basic Table," lists alphabetically by English term 4688 numbered entries with the corresponding terms in the other five languages. There are six thumb-indexed sections, one for each language, where the terms are listed alphabetically with the number given for the entry in the basic table. Each of these sections seems to contain more entries than are in the basic table because synonymous terms have been added that refer to a basic term.

This is a valuable work because few foreign language lists of such terms exist, and there is a current interest in herbal medicine and medicinal plants by both scientists and laypersons.

159. **Steinbichler's Lexicon für die Apothekenpraxis in sieben Sprachen.** Mit fünf selbständigen Alphabeten und einer pharmazeutischen Phraseologie. Frankfurt/Main, Germany: Govi-Verlag G.M.B.H.-Pharzeutischer Verlag, 1963. 476p.

In this dictionary for the pharmacist, there are five independent sections that list alphabetically in a lefthand column pharmaceutical terms in each of these languages: German, English, French, Spanish, and Italian. In the columns opposite are listed equivalent terms in other languages, with Greek and Russian terms added. There are no separate sections with the main listing in Greek and Russian, probably because of the difficulty in handling these alphabets. A short section at the end lists common phrases (in German) used in pharmacy practice, with the corresponding phrases in the other six languages listed in the opposite column. The arrangement seems to be arbitrary. Because the list is rather short, the user can scan for the appropriate phrase.

Even though the basic language of this work is German, it is not difficult for the English language reader to use it.

160. Steinmetz, E. F. **Codex Vegetabilis.** 2nd ed. Amsterdam, The Netherlands: E. F. Steinmetz, 1957. 1 vol. Various paging. index.

The late author of this work, an herbalist, compiled this book over a course of many years. It is a list of 1216 plants with equivalent names in Latin, English, French, German, Dutch, and other European and some Oriental languages. Also included is brief information about the natural habitat, constituents, and actions of the botanicals. A numbered list comprises half the book; the other half is an index of all the names mentioned.

The work is intended for physicians, botanists, herbalists, chemists, druggists, students, and all others interested in botanic drugs. It serves as a polylingual dictionary, although perhaps not a very authentic one. There are no literature references.

161. U.S. National Institute on Drug Abuse. **Guide to Drug Abuse Research Terminology.** Edited by Jack E. Nelson and others. Washington, DC: Government Printing Office, 1982. 130p. bibliog. (DHHS Publication No. (ADM) 82-1237; NIDA Research Issues No. 26).

Both lay and professional readers need a guide to the terminology of the drug abuse field. This terminology is a mixture of words from the medical, social, and psychological fields, and it ranges from colorful street slang to advanced biomedical nomenclature. Many of the slang terms, in particular, are ambiguous, and the meanings change over time.

The work presents in glossary form definitions of drug abuse terms that have been used in the professional research literature. It gives good, brief, nontechnical explanations of each term. The bulk of the presentation is an alphabetically arranged list of words. In addition, appendices provide the following lists: a drug classification scheme; slang terms for the major drugs of abuse; trade names of commercial drugs that are frequently abused; and a list of acronyms used in the field.

This is a useful and valuable guide that is suitable for a wide range of readers.

162. Uphof, J. C. Th. **Dictionary of Economic Plants**. 2nd ed. Revised and enlarged. Monticello, NY: Lubrecht and Cramer, 1968. 591p. bibliog. \$28.00. ISBN 3-7682-0001-9.

A major authoritative and comprehensive work in dictionary form, this book gives short descriptions of economic plants, covering their distribution, products, and main uses.

Included are plants important to agriculture, forestry, fruit and vegetable growing, pharmacognosy, and those important in world trade, as well as some that are of local value only. In addition, a number of plants of ethnologic interest are included because they furnish food, medicine, and other materials of value to primitive people. About 9500 species of both lower and higher plant forms are included, arranged alphabetically by Latin name. Each entry includes the name, synonymous Latin names if any, and descriptions as mentioned above. Plants are not included if sufficient information was not known about them.

The 27-page bibliography is divided by broad subject and geographic headings. Subjects of particular interest are spices and herbs; medicinal plants; essential oils; and narcotic, hallucinogenic, and ordeal plants.

163. Usher, George. **A Dictionary of Plants Used by Man**. New York: Hafner Press, a division of Macmillan Publishing, 1974. 619p. \$15.95. LC 74-2707. ISBN 02-853800-5.

This dictionary provides such information as what a given plant is used for, its habitat, botanical family, and correct scientific name. Plants from all over the world are listed, including trees, shrubs, weeds, herbs, and agricultural plants. A great many tropical and subtropical species are included. A full system of cross-references, covering Latin and common names, has been provided.

164. Winter, Ruth. **A Consumer's Dictionary of Cosmetic Ingredients**. Newly rev. ed. New York: Crown, 1984. 282p. bibliog. \$8.95pa. LC 83-23197. ISBN 0-517-55286-8.

Intended for both men and women users, this alphabetical guide lists, with definitions, common ingredients found in cosmetics. It focuses mainly on consumer interests such as possible harmful effects of the products. A great many substances have been identified, including preservatives, moisture content controls, coloring agents, flavorings, fragrances, processing agents, acids, alkalies, buffers, and neutralizers.

An introductory chapter emphasizes that there can be desirable results of the use of cosmetics but that consumers should know what products contain so they can avoid those not beneficial to them. Also discussed are the roles of the U.S. Food and Drug Administration and the Cosmetic, Toiletries, and Fragrance Association. The latter organization also has published an ingredient dictionary, one more suitable for the professional, the *CTFA Cosmetic Ingredient Dictionary* (see entry 139).

165. Wren, R. C. **Potter's New Cyclopaedia of Botanical Drugs and Preparations.** New ed. Reedited and enlarged by R. W. Wren. Foreword by T. E. Wallis. Holsworthy, England: Health Science Press, 1975. 400p. illus. index. £5.95. ISBN 0-85032-009-7.

The first edition of Potter's work appeared in 1907. Various compilers worked on the different editions. The foreword points out that many plants are still used in Great Britain as household remedies or as ingredients of conventional medicines. It was felt that a reliable source of information should be available for dealers in remedies, physicians, pharmacists, and analysts. The encyclopedia serves this purpose, it is hoped, by supplementing the official *British Pharmacopoeia* (see entry 94) and *The Pharmaceutical Codex* (see entry 333).

The work provides a rather comprehensive list of drug plants and plant materials. Arrangement is alphabetical by common name. Each monograph usually includes scientific name, family, synonyms, habitat, flowering time, description, part used, medicinal use, commercial use, preparations, and perhaps a literature reference (often from an old source such as the Bible or an ancient herbal). There are several appendices: guide to therapeutic action, forms of medicinal preparations, weights and measures, domestic doses and their equivalents, herbal compounds (continental), glossary of medicinal terms, and abbreviations of names of authors of botanic works. Indexes of botanic names, common names, and synonyms are included.

Illustrations in this edition are not as attractive as those in some earlier editions. It's a good work in most respects, although not very critical of the supposed value of the herbs discussed.

9 Directories and Catalogs

Listed in this section are directories of several types and a few catalogs that list products used in the pharmaceutical or related fields.

Most of the directories list people or pharmaceutical manufacturers or provide information about the profession, its organizations, or educational institutions.

In addition, a few directories are included that do not fall in the categories mentioned above. For example, *The SALIS Directory* (entry 184) lists substance abuse libraries and information centers; *Softwhere* (entry 185) is a catalog of health care computer software; and the U.S. Division of Manpower Intelligence's *Registered Pharmacists in 50 States* (entry 186) provides statistical data about pharmacists, not lists of names.

166. American Association of Colleges of Pharmacy. **Roster of Teaching Personnel in Colleges of Pharmacy.** Bethesda, MD: American Association of Colleges of Pharmacy, 1955/56- . Annual. \$15.00 per year.

Listed here are the names of teaching faculty and professional staff members of all the pharmacy schools of the United States and a few schools that are affiliate members of the American Association of Colleges of Pharmacy from outside the United States.

The schools, with addresses and phone numbers, are arranged by state. For each staff member listed with the schools, the following information is given: name, degrees, title, and academic discipline. AACP personal members are indicated with an asterisk beside the name.

The booklet also includes information about the AACP, such as its officers, staff, and affiliate member organizations. There are indices by name of individuals and also by academic discipline.

167. **Chem Sources—U.S.A.** Ormond Beach, FL: Directories Publishing Co., 1958- . Annual.

Each edition of this directory is completely recompiled and revised because there are many changes that take place in the chemical industry in a year.

The "Chemical Section" makes up most of the large volume. The entries are arranged alphabetically by chemical name. Listed are some 90,000 organic, inorganic, pharmaceutical, and biochemicals that are produced and distributed by more than 750 firms. Synonymous names of chemicals should be checked when looking for a compound to ensure that all sources are found. The material is supplied by the companies, and they do not all list like compounds under the same name. Under each chemical listed code letters are supplied that stand for the firm offering the product. A listing of the companies by code is provided.

Also included is an "Applications Section" that categorizes the chemical industry by products and/or product activities.

168. **Chemical Week. Buyers' Guide Issue.** New York: McGraw-Hill, 1937- . Annual.

The guide is usually published as Part 2 of the October issue of *Chemical Week*. The title has varied somewhat. It is a guide to sources of supply for chemicals and chemical packaging products. The chemicals and the packaging products are treated in two separate sections.

The chemicals section is in several subsections. First, a company directory is supplied with addresses and phone numbers for all the companies whose products are listed in the chemical list. Next, there are two alphabetical sections of insert and full page ads for chemicals and raw material producers, sales subsidiaries, and distributors. The ads give complete company product lines plus technical product data and formulas. The next (and largest) section lists chemicals, raw materials, and specialties alphabetically by product name, indicating the companies producing the product. Over 8000 products are included. The next section lists trade names of the products.

The packaging section is much shorter, but it is set up like the chemicals section with sources of supply listed for more than 400 packaging products.

169. **Chemist and Druggist Directory and Tablet and Capsule Identification Guide.** Tunbridge Wells, Kent, England: Benn Business Information Services, Ltd., 1868- . Annual. £35.00; £39.00 overseas. ISBN 0-86382-006-9 (1984).

An old, well-established information source for the entire British pharmaceutical profession and industry, this directory contains a wealth of valuable information, particularly for those in the United Kingdom.

Included are the following main sections: (1) Tablet and capsule identification guide that allows these drugs to be identified in several different ways, such as by markings, color, manufacturers' codes, and size; (2) Manufacturers and suppliers index; (3) Buyers' guide that lists products with names of manufacturers, sole agents, and wholesalers; (4) Pharmaceutical organizations with addresses and officers; (5) Hospital pharmacists geographically arranged; also lists NHS pharmaceutical officers, family practitioner committees, local pharmaceutical committees, and emergency services, and who owns whom; and (6) Sections on multiple retail outlets, wholesalers, pharmaceutical services under NHS, misuse of drugs, the poisons act, controls in Republic of Ireland, medicines acts, law for retailers, and value added tax.

170. **Drug and Cosmetic Catalog.** New York: Harcourt Brace Jovanovich, 1931- . Annual. \$17.50pa.

The title of this annual has varied slightly since its inception in 1931. It contains a wide range of useful information that is updated each year and is of concern to the industry.

Included are the following sections: (1) A list of consulting and special services by type; (2) Private formula, contract packagers, and service manufacturing lists by type of product; (3) Aerosols; (4) Companies and consultants concerned with packages and packaging materials; (5) Machinery and equipment manufacturers; (6) Raw materials directory (the bulk of the catalog); (7) A short list of the industry's periodicals; (8) Associations of the industry; (9) Trade name directory; and (10) Suppliers address section.

171. **Executive Directory of the U.S. Pharmaceutical Industry.** Princeton, NJ: Chemical Economic Services, 1966- . Annual. ISSN 0071-3309.

The companies are listed alphabetically with the following information usually included: company name and address; ownership (if a subsidiary or division of another company); corporate officers, division executives, and key staff personnel; members of the board of directors; overview of marketing, business, or product groups; plants (domestic and foreign with addresses and plant managers); subsidiaries (domestic and foreign); annual sales; number of employees; modus operandi (manufacturer/marketer, private label manufacturer, distributor, repacker, etc.); and products with trade names and/or therapeutic classifications. There is a cross-index.

172. **Hayes Druggist Directory.** Newport Beach, CA: Edward N. Hayes, Publisher (4229 Birch St., Newport Beach, CA 92660), 1912- . Annual.

This directory lists all retail drug stores in the United States with their addresses, financial standing, and credit rating. The work is compiled each year with the assistance and cooperation of many State Boards of Pharmacy, drug chains, and wholesale druggists. Only licensed and registered pharmacies are listed. The arrangement is alphabetical by state, then by city and name of the pharmacy. Appended is a list of wholesale druggists with addresses.

Regional editions of the directory are available, and the publisher also can supply computerized mailing labels of the directory listings.

173. **Industrial Research Laboratories of the United States.** 18th ed. Edited by Jacques Cattell Press. New York: R. R. Bowker, 1983. 762p. index. \$130.00. LC 21-26022. ISBN 0-8352-1744-2.

Listed here are industrial organizations that have research and/or development capabilities and some nonprofit and privately financed firms doing research and development for industry. Research programs conducted and supported totally by universities and/or government agencies and activities devoted entirely to quality control and testing are not included.

This edition of the frequently revised work contains 11,272 entries, arranged alphabetically by parent organization. Basic information about individual companies includes name, address, telephone, TWX, telex numbers, cable address, officers of the company, and, where applicable, divisions and subsidiaries. Also included are names and addresses of laboratories with names and titles of administrators and research personnel, number of professional staff and other staffing information, and a statement of the chief research and development activity.

There are indexes arranged geographically by the city and state, by personnel, and by classification. The latter is important when the user is interested in companies producing specific kinds of products such as pharmaceuticals. Under "pharmaceutics" there are subheadings such as "Antibiotics," "Biologicals," "Medicinal Chemistry," and "Therapeutics," to name a few.

174. **McCutcheon's Emulsifiers and Detergents.** North American Edition. Glen Rock, NJ: McCutcheon Division, MC Publishing Co., 1947- . Annual. \$45.00.

This publication has had various titles since its inception. Intended for purchasers and users of surfactant materials, the annual listing describes over 4000 surfactant materials by trade name, manufacturer, identity, concentration, type, HLB (hydrophilic lipophilic balance) number, and applications. In addition to the main listing of emulsifiers and detergents, there are several other sections as follows: Food emulsifiers; Textile products; Formulated detergent concentrated bases; Intermediates; Chemical classification index; HLB index of materials; Ionic type classification; and Company index. The information provided about the products was furnished by the manufacturer.

175. **Marketing Guide and Company Directory for the Cosmetic Industry.** Westport, CT: Technomic Publishing Co., 1973. 101p. bibliog. LC 73-83278. ISBN 0-87762-120-9.

The cosmetic and toiletries field is diverse and complex, and published information is scarce. The market data in this guide were taken from the trade journals.

The presentation, much of it tabular, is arranged in these sections: (1) Introduction; (2) Economic environment; (3) Industry structure; (4) Markets; (5) Distribution channels; (6) Information sources and trade associations; (7) Description of major cosmetics and toiletries companies; and (8) Directory of cosmetics and toiletries companies.

Although the publication was published a number of years ago, some of the material is still of value.

176. **Marketing Guide to the Pharmaceutical Industry.** Westport, CT: Technomic Publishing Co., 1973. 108p. LC 73-76667. ISBN 0-87762-113-6.

This guide basically attempts to describe the pharmaceutical industry and the products it is involved with. It presents market information that was supplied from public sources and from the Pharmaceutical Manufacturing Association. The following sections are included: (1) Introduction; (2) Economic environment; (3) Industry structure; (4) Markets for pharmaceuticals; (5) Marketing in the pharmaceutical industry; (6) Trade associations and information sources; (7) Description of major pharmaceutical companies; (8) Directory of pharmaceutical companies; (9) Trade names arranged according to product group; and (10) Glossary.

177. **Med Tech Directory.** Compiled by Jules L. Marx and Mitchell R. Hauser. New York: Whale Securities Corporation, Med Tech Services (545 Madison Ave., New York, NY 10022), 1983- . Annual. \$150.00.

This directory is a financial and operating profile of nearly 700 publicly owned personal care, health care, and medical technology companies. It is intended primarily for the medical, financial, and business communities.

The companies are listed alphabetically with the following information: address; phone number; officers; title and ownership; description; financial summary; exchange;

med-tech category; per-share stock data; divisional breakdowns; balance sheet; number of employees; and footnotes regarding name changes and like matters. Also included in the directory is a section listing companies under categories such as laboratory and pharmacy services; hospital, surgical and medical suppliers; personal care products; and so on. In addition, there is a geographic breakdown by state, and an index showing company name changes and takeovers.

The senior compiler holds a Ph.D. in pharmacy, and there is a good deal in the directory of interest to pharmacy.

178. National Association of Chain Drug Stores. **NACDS Membership Directory**. Alexandria, VA: National Association of Chain Drug Stores. Annual.

Each section of the directory is printed on different colored paper. Included are the following lists: NACDS chain drug members (including names of executives and buyers); NACDS associate members (including names of executives); geographic listing of NACDS chain drug company headquarters; listing of states in which NACDS chain drug members operate (by state and by company); other industry-related associations (drug trade associations, state boards of pharmacy, state pharmaceutical associations, and state retail associations); accredited colleges of pharmacy; and NACDS chain drug geographic store listing.

179. National Wholesale Druggists' Association. **Membership and Executive Directory**. Alexandria, VA: National Wholesale Druggists' Association, 1958(?)-. Annual.

Useful information is provided in this directory, including NWDA officers and board of directors, staff responsibilities, and committees; active members (by states); associate members (by states); active members (alphabetical); associate members (alphabetical); international members; the drug trade press; list of colleges of pharmacy; national drug industry associations; and NWDA consultants.

180. **OPD Chemical Buyers Directory**. New York: Schnell Publishing Co., 1969-. Annual. ISSN 0276-539X.

This publication was formerly entitled *Chemical Buyers Directory*, and was once popularly known as the *Oil, Paint, and Drug Reporter's* "Green Book." Its main purpose is to list chemicals and show who supplies them. There are six parts, as follows: (1) Company brochure/catalog inserts in alphabetical order; (2) List of about 16,800 chemical and related materials, arranged alphabetically (the largest section); (3) Chemicals supplier index, which contains the alphabetical listing of the names, addresses, and phone and telex numbers for about 1800 suppliers of the chemicals listed previously; (4) List of about 100 shipping, storage, and related services; (5) Shipping and storage index, which lists names, addresses, phone and telex numbers of about 350 companies in the field; and (6) Index of advertisers.

181. **Pharmaceutical Directory, 1984**. Washington, DC: American Pharmaceutical Association, 1984. 27p. \$6.00pa.

The purpose of this small annual directory is said to be to help the user find his way through the world of pharmacy—its major organizations, schools, boards, and publications.

The first section presents information about the American Pharmaceutical Association, such as the names of its officers, trustees, and committees, and the names of the officers of the auxiliary and affiliated organizations such as the Academy of

Pharmacy Practice, Academy of Pharmaceutical Sciences, and the Student American Pharmaceutical Association. The remaining sections list national pharmaceutical organizations, state pharmaceutical associations, state boards of pharmacy, and schools and colleges of pharmacy. Also, a short selected list of national pharmacy journals and newsletters is included. In all cases addresses and phone numbers are provided.

182. **Pharmaceutical Manufacturers of the United States.** Park Ridge, NJ: Noyes Data Corporation, 1977. 266p. index. LC 77-89633. ISBN 0-8155-0677-5.

Listed here are 335 leading pharmaceutical and health care products manufacturers of the United States. The firms are listed alphabetically by business name with the following information usually given: address; phone number; whether or not the company is a division or subsidiary of another; product category; annual sales; number of employees; names and titles of principal executives; a listing of some products, including trade name and pharmacologic classification; location of manufacturing facilities and research laboratories; domestic subsidiaries and affiliates; and foreign subsidiaries.

Somewhat similar information can be found in *Industrial Research Laboratories of the United States* (see entry 173), but pharmaceutical manufacturers are listed among other manufacturers.

183. **Pharmacology and Pharmacologists: An International Directory.** New York: Oxford University Press, 1981. 387p. index. \$125.00. LC 79-40202. ISBN 0-19-200101-9.

This biographic directory lists about 3200 pharmacologists from all parts of the world. Also included is a list of national, regional, and international pharmacologic societies and an essay that is a general discussion of the field.

The biographic entries (arranged alphabetically) provide the following information about each pharmacologist: name; address at work; phone number; current position and year of appointment; general field of work; research activities; society of which the biographee is a member; year of birth; academic and professional qualifications; past appointments; and selected publications. A useful feature of the work is the Research Activities Index, which makes it possible for the user to find names of other people engaged in similar work.

The information in the directory was obtained by "circularizing over 12,500 pharmacologists worldwide." The compilers hope that the directory's appearance will encourage others to provide information about themselves for a second edition. It does appear that there are many omissions in this edition.

184. **The SALIS Directory** (Substance Abuse Librarians and Information Specialists), 1984. Edited by Andrea Mitchell for SALIS with the assistance of Judith Lubina. Berkeley, CA: Alcohol Research Group, Medical Research Institute of San Francisco and University of California, Berkeley (1816 Scenic Ave., Berkeley, CA 94709), 1984. 69p. index. \$10.00pa.

This is the third revised and updated edition of the *SALIS Directory*. It lists over 100 substance abuse libraries, clearinghouses, and resource and information centers. Most of the entries are for organizations whose primary concern is substance abuse materials. However, some other health science libraries are included where the librarian has substance abuse expertise or in states where there may be no other special substance abuse collection. The libraries are listed alphabetically by states of the United States, with some foreign country libraries listed at the end. Other sections provided include a

list of National Research Centers of the National Institute on Alcohol Abuse and Alcoholism; a list of associations, foundations, societies, councils, self-help groups, networks, and other organizations concerned about substance abuse; an alphabetical organization index; and a contact person index (usually the librarian).

About each library the following information is usually given: name, address, and phone number; type of institution; parent organization; contact person; date established; size of collection and its strengths; services provided; and memberships in organizations.

185. **Softwhere: Health Care 1984.** Minneapolis, MN: Moore Data Management Services, 1984. 348p. index. \$29.95pa.

A comprehensive listing of available health care computer software, this publication is made up of material reprinted from listing forms submitted by software vendors.

The book is in four sections: (1) Software listings; (2) Vendor index; (3) Alphabetical package index; and (4) Alphabetical vendor index. The first and main section presents listings in these areas of interest: chiropractic, clinical database, dental, diagnostic, diet/nutrition, educational, financial/general ledger, hospital/nursing home administration, medical, office management, pharmaceutical, psychiatry/psychology, system aids/enhancements, and veterinary. Within each area the programs are listed in price order from the least expensive to the most expensive. The vendor index is a list by number. These numbers appear in Section 1 and refer to this index where one finds the following information: vendor name, address, phone number, and person to contact. Also provided with each entry is a listing of the vendor's other software packages, which have been described in Section 1. In the alphabetical package index, each package name is listed with a reference to the page number in Section 1 where it is described. The alphabetical vendor index lists the names with references to the vendor index number.

The information provided about each package listed in Section 1 is in tabular form. It includes the following: (1) Package name and acronym if one is generally used; (2) Vendor number; (3) Package description; (4) Suggested retail price; (5) Compatible hardware; (6) Source language; (7) Operating system; (8) Memory requirement; (9) Source code available (yes or no and price); (10) Training (yes or no and type of training); (11) Support (yes or no and type of support); (12) Documentation (yes or no); (13) Medium supplied on (disk, tape, etc.); (14) Warranty (yes or no); (15) Number of installations (programs sold); and (16) First installation date.

186. U.S. Division of Manpower Intelligence. **Registered Pharmacists in 50 States, the District of Columbia, and Puerto Rico.** Washington, DC: U.S. Department of Health, Education, and Welfare, Division of Manpower Intelligence, 1973-1975. 52 vols. (DMI Health Manpower Data).

In 1971 the American Association of Colleges of Pharmacy received a contract from the Health Resources Administration, Bureau of Health Resources Development, Division of Manpower Intelligence to study the feasibility of establishing a pharmacy manpower information system. A subsequent award extended the contract and provided for the establishment of a manpower reporting system. The manpower data collection and compilation system was implemented by the AACP through the office of the Pharmacy Manpower Information Project which worked closely with the National Association of Boards of Pharmacy. Questionnaires were distributed to licensed pharmacists in the states through the state boards.

Preliminary data from these questionnaires are found in this series of reports. There is one for each state, the District of Columbia, and Puerto Rico. The reports contain a highlights section and tables as follows: number of active resident pharmacists by age and sex; number by racial-ethnic background and sex; number by years of undergraduate pharmacy education, sex, and age; number by principal place of pharmacy practice, sex, and age; number in community pharmacies, hospitals, and nursing homes by employment status, sex, and age; number by hours worked per week, sex, and age; number by county of principal place of practice, sex, and age; number by selected work activity and percent of time devoted to selected work activity; number by principal place of practice and hours worked per week; number by county and principal place of practice; and number by pharmacy school granting first degree and principal place of pharmacy practice. A copy of the questionnaire is included.

187. Who's Who in the Cosmetic Industry: CTFA Membership Directory. Washington, DC: Cosmetic, Toiletry, and Fragrance Association, Inc. (1133 Fifteenth St., NW, Washington, DC 20005), 1973-. Annual.

There are several sections to this directory: (1) Cosmetic, Toiletry, and Fragrance Association officers, directors, and staff; (2) Active member companies; (3) Associate member companies; (4) Active individual members; (5) Associate individual members; and (6) Industry trade publications. In the company lists, the following information is provided: name, address, phone number, officers, and products. If there are subsidiary companies it is so indicated. In the lists of individual members, the place of employment only is given. About 40 periodicals, with addresses and editors, are included in the industry trade publications list.

188. World Directory of Schools of Pharmacy, 1963. Geneva, Switzerland: World Health Organization, 1966. 301p.

This is a volume in a series of directories of professional educational institutions. The salient features of pharmacy education in 81 countries are described, based on answers to a questionnaire. The descriptive accounts and numerical data provided can serve only as a general guide to facilities and resources for pharmaceutical training because of the age of the publication.

The countries are listed alphabetically. Each is dealt with in a separate chapter, which is introduced by data such as population figures, number of schools, and number of pharmacists. Then, general information about pharmaceutical studies in the country is provided. Following is a table that provides names and addresses of the schools, the year instruction started, number of teaching staff, total enrollment, admissions (number of first year students), number of graduates (in 1963) usually divided into males and females, and annual tuition fees. Appended to the book are several tables that provide data by continent on schools of pharmacy and conditions governing practice.

189. World Pharmaceutical Firms. Park Ridge, NJ: Noyes Data Corporation, 1972. 122p. \$24.00pa. LC 76-171958. ISBN 0-8155-0398-9.

Although somewhat out of date now, this publication is still used because it brings together in a compact listing information that might otherwise have to be sought from a variety of sources. It lists, alphabetically by country, under geographic area, over 6000 pharmaceutical firms. The geographic areas are North America, South America, Western Europe, Eastern Europe, North Africa and Middle East, Africa, Asia, and Australia. There is no index by name of firm; one must know in what country the sought-after company is located.

An up-to-date list of pharmaceutical firms of the world can be found in *World Pharmaceutical Directory/1984* (see entry 190), but there is no geographic approach.

190. **World Pharmaceuticals Directory/1984.** Chatham, NJ: Unlisted Drugs (P.O. Box 401, Chatham, NJ 07928), 1984. 518p. \$360.00. ISBN 0-913210-07-2.

This unique directory is a collection of worldwide information on investigational compounds and marketed pharmaceuticals as reported in the 420 issues of the periodical *Unlisted Drugs* (see entry 362). New cumulated editions of the directory are to be issued from time to time.

The main section, "Producers Profiles," lists the drug manufacturers of the world in mnemonic company code order with the following information: address; a listing of all drugs reported for that producer for over 35 years; research code numbers, acronyms, nonproprietary and trade names; synonym/product/ingredient relationship; number of ingredients and a list of them; original and subsequent *Unlisted Drugs* references. Many of the products included are no longer in use; others were only tested and never marketed in any country. Much of the older data included could not be verified or updated, but it was felt to be of potential interest.

The other section of the book, "Corporate Names and Addresses," shows manufacturers, names with cross-references, mnemonic codes, and addresses.

The compilation lists over 180,000 drugs manufactured by about 7000 companies from more than 80 countries. It should be noted that there is no approach to the drugs through their names. *Unlisted Drugs*, however, provides this.

10 Handbooks, Manuals, and Guides

The materials listed in this section cover a wide variety of areas. Included are works for the practicing pharmacist, the pharmaceutical scientist, those involved with drug abuse, and those involved in pharmaceutical manufacturing.

Guides of interest to the practicing pharmacist include the following: the American Society of Hospital Pharmacists' *Procedures for Handling Cytotoxic Drugs* (entry 192), the two titles by Bartilucci (entries 194 and 195), Bochner's *Handbook of Clinical Pharmacology* (entry 199), which is primarily intended for pharmacologists, Connors's *Chemical Stability of Pharmaceuticals* (entry 206), Conte's *Manual of Antibiotics and Infectious Diseases* (entry 207), Dorr's *Cancer Chemotherapy Handbook* (entry 211), Mason's *Clinical Handbook of Antipsychotic Drug Therapy* (entry 223), Merck *Manual of Diagnosis and Therapy* (entry 224), Merck *Veterinary Manual* (entry 225), *Pharmaceutical Handbook* (entry 227), Shader's *Manual of Psychiatric Therapeutics* (entry 232), Shirkey's *Pediatric Dosage Handbook* (entry 233), Skeel's *Manual of Cancer Chemotherapy* (entry 235), and Swonger's *Drugs and Therapy* (entry 243).

Two titles are intended to assist the health professional in recognizing tablets or capsules that patients may be taking. These are Collier's *Imprex* (entry 204) and *Drug Identification Guide* (entry 213), the latter taken from the *Physicians' Desk Reference* (entry 335), which is described in the "Drug Compendia" section (chapter 11). The *Chemist and Druggist Directory and Tablet and Capsule Identification Guide* (entry 169), described in the preceding section, covers British drugs. These drug identification publications are also used in identifying drugs of abuse. Bludworth's *300 Most Abused Drugs* (entry 198) is intended especially for this purpose. Choulis's *Identification Procedures of Drugs of Abuse* (entry 202) deals with the analyses of commonly abused drugs. Clarke's *Isolation and Identification of Drugs in Pharmaceuticals, Body Fluids, and Post-Mortem Material* (entry 203) provides practical information on the isolation of the drugs and identification techniques.

Practicing pharmacists as well as other health professionals are concerned with the accidental ingestion of poisonous substances. Several books deal with this subject: *Dreisbach's Handbook of Poisoning* (entry 212), *Gosselin's Clinical Toxicology of Commercial Products* (entry 218), *Kline's Psychotropic Drugs: Manual for Emergency Management of Overdosage* (entry 221), *Silverman's The Consumer's Guide to Poison Protection* (entry 234), and *Frohne's A Colour Atlas of Poisonous Plants: A Handbook for Pharmacists, Doctors, Toxicologists, and Biologists* (entry 215).

There are several reference works listed that deal with legal aspects of the pharmacy field: *Bogomolny's Handbook on the 1970 Federal Drug Act* (entry 200), *Controlled Substances Handbook* (entry 208), *The Pharmacist's Guide to the Controlled Substances Act of 1970* (entry 228), and *The Complete Handbook of Approved New Animal Drug Applications in the United States* (entry 205), the latter dealing with new drugs for animals.

Three guides included in this section deal with business aspects of the field: *Drug Store Market Guide* (entry 214), *Prescription Drug Industry Fact Book* (entry 229), and *Tallarida's The Top 200—1984: A Guide to the Most Widely Prescribed Drugs in America* (entry 244).

Although pharmacists are no longer involved very much with formulating products in the drugstore, a few formulary titles have been included because there is still interest in them. One title, *Bennett's The Chemical Formulary* (entry 197) was initiated some years ago, but new volumes have recently been added to the set. There are two titles listed that are older formularies: the American Pharmaceutical Association's *Pharmaceutical Recipe Book* (entry 191) and *Belanger's Modern Manufacturing Formulary* (entry 196).

Included in this section are two works that are standard handbooks in fields other than pharmacy but which have a great deal of value to the pharmaceutical scientist: *Brady's Materials Handbook* (entry 201) and *Perry's Chemical Engineers' Handbook* (entry 226).

There are numerous publications included in this section that are advanced-level scientific handbooks, and they cover a number of areas. Several are published by the CRC Press, known for its scholarly handbooks. *Dev's CRC Handbook of Terpenoids* (entry 209), *Devon's Handbook of Naturally Occurring Compounds* (entry 210), *Goldberg's CRC Handbook on Pharmacology of Aging* (entry 217), *Gupta's Drugs* (entry 219), *Iversen's Handbook of Psychopharmacology* (entry 220), *Raffauf's Handbook of Alkaloids and Alkaloid-Containing Plants* (entry 230), *Schauenberg's Guide to Medicinal Plants* (entry 231), *Soderman's CRC Handbook of Identified Carcinogens and Noncarcinogens* (entry 236), the five titles by *Sunshine* (entries 238-242), *Thomas's Handbook of Pharmaceutical and Clinical Measurement and Analysis* (entry 245), and *Wagner's Plant Drug Analysis* (entry 246).

Other titles listed include miscellaneous materials such as *Barnes's Drug Dosage in Laboratory Animals: A Handbook* (entry 193), *Geigy Scientific Tables* (entry 216), *Marmion's Handbook of U.S. Colorants for Foods, Drugs, and Cosmetics* (entry 222), and *Stahr's Analytic Toxicology Methods Manual* (entry 237).

191. American Pharmaceutical Association. Committee on Recipe Book. **The Pharmaceutical Recipe Book**. 3rd ed. Washington, DC: American Pharmaceutical Association, 1943. 551p. index.

This book has mainly historical value. The American Pharmaceutical Association began collecting unofficial formulas as early as 1856, the intent being to put in the hands

of the practicing pharmacist a reliable and comprehensive book of recipes applicable to his business. This is the last collection of formulas the Association produced.

The book contains an interesting historical introduction, the Code of Ethics of the American Pharmaceutical Association, and the sections of formulas arranged in classified order. Headings of the sections are: (1) Pharmaceutical formulas (pharmaceutical and hospital, preparations for use by diabetics, dental, podiatry, and veterinary); (2) Flavoring extracts and imitation flavors; (3) Table of certified (colors) coal tar dyes; (4) Cosmetics formulas; and (5) Technical and miscellaneous formulas. Also included are these sections: table of average doses of unofficial drugs; schedule of antidotes for poisons; table of solubilities, table of synonyms; table of Latin terms and abbreviations; and vitamin review.

192. American Society of Hospital Pharmacists. **Procedures for Handling Cytotoxic Drugs.** Bethesda, MD: American Society of Hospital Pharmacists, 1983. 98p. \$10.00pa.

Recently the number and usage of antineoplastic drugs and other cytotoxic agents have increased considerably. Long-term exposure to these drugs may produce teratogenic and/or carcinogenic effects, and other adverse effects on personnel who administer them have been noted. However, the danger is felt to be extremely low if proper precautions are taken.

The book contains recommendations issued by various groups for procedures involving safe handling, preparation, administration, and disposal of cytotoxic drugs. Included are recommendations from national and international groups, including those from Canada, Norway, Sweden, Great Britain, and Australia, and "Recommendations for Handling Cytotoxic Drugs in Hospitals," developed by the American Society of Hospital Pharmacists' Professional and Research Services Department.

The intent in publishing the recommendations was to provide practitioners with a review of various guidelines and to encourage pharmacists to continue their study of the problem.

193. Barnes, C. D., and L. G. Eltherington. **Drug Dosage in Laboratory Animals: A Handbook.** 2nd ed. Revised and enlarged. Berkeley, CA: University of California Press, 1973. 341p. bibliog. index. \$39.00. LC 64-21066. ISBN 0-520-02273-4.

The authors of this handbook say they compiled it as a result of their own frustration in attempting to find appropriate drug dosages for use in laboratory animals. Seven commonly used species of laboratory animals are considered: the mouse, rat, guinea pig, rabbit, cat, dog, and monkey. Parenteral and oral routes of administration are included. Over 4600 doses are included, and a bibliography of 1278 literature references is provided.

The introduction to the handbook includes discussions of factors modifying drug responses and pharmacologic factors that influence drug disposition. Following is a section on anesthetic doses. The main section is composed of the drug dosage tables. Appendices present two tables: hormone maintenance and replacement dosages and physiologic solutions.

194. Bartilucci, Andrew J., and Jane M. Durgin. **Giving Medications Correctly and Safely.** Rev. ed. Oradell, NJ: Medical Economics, 1979. 152p. bibliog. index. \$12.95pa. ISBN 0-87489-216-3.

A compact manual, this work is designed to serve as a guide and quick reference for persons who dispense, administer, or monitor drugs. It should be useful in hospitals, clinics, nursing homes, physicians' offices, and health centers of all kinds.

About 125 of the most frequently prescribed drugs are considered. They are listed alphabetically, by either brand or generic name. Both kinds of names are listed in the index. The following information is provided in the drug monographs: manufacturer; American Hospital Formulary Service number; actions; availability; special identification; usual dosage range; indications; contraindications; side and adverse effects; interactions; and clinical implications. The book also includes special sections on foods that foil drugs; and crushing tablets and opening tablets, when is it safe?

195. Bartilucci, Andrew J., and Sister Jane M. Durgin. **Language Guide for the Clinical Pharmacist**. New York: St. John's University Press, 1971. 16p.

This booklet was designed to assist the English-speaking pharmacist in communicating with a non-English speaking patient. Listed are 16 common questions a pharmacist may wish to ask a patient, and 15 questions a patient may wish to ask the pharmacist. The booklet is designed so the pages can be placed opposite each other with the English questions or answers on one side and the translations on the others, in each of these languages: Chinese, French, German, Italian, Polish, Spanish, and Yiddish. In addition, when suitable, there are a list of answers the pharmacist or patient may point to.

Although limited by its size, this is an ingeniously arranged work that should prove helpful.

196. Belanger, Emil J. **Modern Manufacturing Formulary: Compiled for Chemists, Manufacturers, Pharmacists, Technicians, and Students**. New York: Chemical Manufacturing Co., 1958. 399p. bibliog. index. \$10.00.

Compiled by a practicing pharmacist, this book provides formulas for many special products as follows: selected food products; flavoring extracts; practical household formulas; cosmetic specialties and toilet preparations; medicinal preparations; veterinary remedies; carbonated beverages, ginger ales, beverage extracts, fruit oils, and so on; and miscellaneous formulas. There is a lengthy appended section, a great deal of which is out of date now and has historical value only.

197. Bennett, Harry, ed. **The Chemical Formulary**. New York: Chemical Publishing Co., 1933-. index. about \$35.00 per volume. ISBN 0-8206-0304-X (volume 25).

The subtitle of the current volume in this series is "Collection of Commercial Formulas for Making Thousands of Products in Many Fields." To date, formulas for about 100,000 products have been included that are of value to the chemist, engineer, executive, manufacturer, or layperson. Each volume presents new material; the formulations are not repeated.

Examples of types of products included are: beverages and foods; coatings; cosmetics; drug products; detergents and sanitizers; elastomers and plastics; metals; polishes; textile specialties; and miscellaneous others. Also included is useful information such as federal laws regulating foods, drugs, and cosmetics; lists of incompatible chemicals; tables of weights and measures; emergency first aid for chemical injuries; and trademark chemicals and information about where to buy them. Cumulative indexes have been published.

198. Bludworth, Edward. **300 Most Abused Drugs: An Identification Handbook**. Rev. ed. Tampa, FL: Trend House, 1976. 29p. illus. (col). index. \$2.95pa. ISBN 0-88251-070-3.

This publication is an updated edition of an earlier similar work that also has been issued by other publishers. It contains color photographs of commonly abused drugs, many of them prescription tablets and capsules. Trade names, generic names, classification schedule numbers, ingredients, and amounts of each are indicated, with supplementary descriptions and a glossary of terms in separate sections. Publications such as this are very useful in helping laypersons, physicians, and law enforcement officials identify abused drugs, even though street drugs are often disguised and may require chemical analysis for positive identification. A number of publications contain sections with similar photographs, but this compact booklet is as valuable as any.

199. Bochner, Felix, George Carruthers, Jens Kampmann, and Janice Steiner. **Handbook of Clinical Pharmacology**. 2nd ed. Boston, MA: Little, Brown, 1983. 352p. bibliog. index. \$13.95pa. LC 82-84100. ISBN 0-316-10064-1.

A compact but rather comprehensive work, this handbook summarizes clinically important aspects of the therapeutic use of commonly used drugs.

The first 11 chapters cover such topics as rational drug therapy, ways to improve prescribing, measurement of drugs in plasma, drugs in renal and hepatic diseases, medication during pregnancy and lactation, medication in children and the elderly, acute poisoning and drug overdose, and definitions of terms. The remainder of the book provides a dictionary of drug profiles for more than 100 drugs, arranged alphabetically by generic name. The following information is usually provided about each drug: pharmacologic action and mechanism of action, absorption, distribution, elimination, dosage schedule, special dosage situations, therapeutic concentrations, adverse reactions, interactions, and literature references, including review articles.

The book is similar to Knoben and Anderson's *Handbook of Clinical Drug Data* (see entry 303). It is of value to clinicians, practitioners, and pharmacologists.

200. Bogomolny, Robert L., Michael R. Sonnenreich, and Anthony J. Roccograndi. **A Handbook on the 1970 Federal Drug Act: Shifting the Perspective**. Springfield, IL: Charles C. Thomas, 1975. 182p. illus. index. \$13.50. LC 74-8452. ISBN 0-398-03190-8.

This publication analyzes the major revisions of 1970 of the federal drug laws in the United States. The book deals particularly with the control of stimulant, depressant, hallucinogenic, and narcotic drugs.

The work is presented in two sections. The first, which is called an introduction, presents a legislative history of the act, and the meaning of the provisions are pointed out. Chapter headings are: (1) Development of the act; (2) Getting the bill through Congress; (3) Unresolved issues; and (4) Effective dates. The second part presents a section-by-section analysis of the act. Chapters in this part are: (5) Title I—Rehabilitation programs relating to drug abuse; (6) Title II—Control and enforcement; and (7) Title III—Importation and exportation: amendments and repeals of revenue laws.

The book promises to be useful to a number of groups, particularly lawmakers and persons who must comply with federal laws such as physicians, drug researchers, pharmacists, and manufacturers of drugs.

201. Brady, George S., and Henry R. Clauser. **Materials Handbook: An Encyclopedia for Managers, Technical Professionals, Purchasing and Production Managers, Technicians, Supervisors, and Foremen**. 11th ed. New York: McGraw-Hill, 1977. 1011p. index. \$49.50. ISBN 0-07-007069-5.

This well-known handbook, first published more than 50 years ago, describes important characteristics and economics of a wide variety of commercially available materials. About 14,000 substances are included, arranged alphabetically. The monographs are usually about one-half page in length. Included among the types of materials listed are industrial materials, chemicals, minerals, foodstuffs, fuels, plastics and rubbers, pharmaceutical substances, drug plants, perfume oils, and naturally occurring substances of many kinds.

The volume also contains short sections on the elements of materials, economics, and the nature of properties of materials.

202. Choulis, Nicholas H. **Identification Procedures of Drugs of Abuse**. Ghent, Belgium: European Press, 1977. 454p. illus. bibliog. index. \$79.00. ISBN 90-6295-061-2.

The information presented in this book is basic for dealing with the analyses of commonly abused drugs. The material has been organized into six sections. The drugs are discussed under the following categories: stimulants, depressants, narcotics, and hallucinogens. There is, in addition, a section on illicit street samples. Analytic methods for each type of drug are examined. The emphasis is on instrumental methods of analysis such as chromatography and spectroscopy.

Works of this kind are important because substances sold on the illicit drug market contain a variety of adulterant materials in addition to the principal active ingredient. There is no way to predict the makeup or potency of a given sample in advance; each must be regarded as unique. The proper treatment of a victim of an abused drug depends on accurate analysis of the intake substance. As yet there are no standard tests generally accepted for identifying all types of illicit drugs, but books of this kind will assist analytic laboratories, industry, city and state police departments, preemployment screening facilities, heroin treatment centers, clinical emergency rooms, and others in dealing with the drug problem. The book also can be used by students in the health professions, particularly pharmacy, and in analytic chemistry courses.

203. Clarke, E. G. C., ed., assisted by Judith Berle. **Isolation and Identification of Drugs in Pharmaceuticals, Body Fluids and Post-Mortem Material**. Volumes 1-2. Produced in the Department of Pharmaceutical Sciences, The Pharmaceutical Society of Great Britain. London, England: The Pharmaceutical Press, 1969-1975. 2 vols. illus. bibliog. index. (An Extra Pharmacopoeia Companion Volume). \$52.00 (volume 1); \$38.00 (volume 2). ISBN 0-85369-061-8; 0-85369-095-2.

It has been an increasingly difficult problem to identify unknown drugs and potentially poisonous substances because of the vast increase in the number of compounds that have come into everyday use. For this reason this manual was written. It is an authoritative work for those who are faced with identifying an unknown compound that may be present in a pharmaceutical product, a specimen of tissue or body fluid in a living patient, or postmortem material. Practical information is provided on isolation and identification techniques.

Both volumes are organized the same way. Volume 2, which is about half the size of Volume 1, is a supplement to it. Part 1 of both presents chapters on analytic techniques. Part 2 is made up of analytic and toxicologic data presented in individual monographs for more than 1000 (in Volume 1) drugs and related compounds. Arrangement is usually by British Approved Name. Part 3, "Indexes to Analytical Data," is an arrangement of the more important analytic data of Part 2 in sequential order and tabular form. It includes melting points; paper chromatographic data;

thin-layer chromatographic data; gas chromatographic data; the Marquis test; ultraviolet absorption maxima; infrared peaks, and infrared spectra. Part 4 lists reagents and tests and includes a bibliography of 900 references (in Volume 1) cited in the text.

The drug monographs include the following information: synonymous and proprietary names, chemical name, structural formula, molecular weight, physical properties, relevant analytic data, and notes on metabolism and toxicity.

A revised edition of the work is scheduled to appear soon.

204. Collier, W. A. L. **Imprex: Index of Imprints Used on Tablets and Capsules**. 9th ed. London: H. K. Lewis & Co.; distr. Drug Intelligence Publications (Hamilton Press, Inc., Dept. E-1, Hamilton, IL 62341), 1982. 168p. \$7.00. ISBN 0-9507531-0-6.

It has long been a problem for a new physician or pharmacist to recognize tablets that patients may be taking or to recognize those to which a patient refers. A code with which tablets could be stamped and identified is needed. Although some progress has been made in that respect, it will obviously be some years before such a universal code will be adopted. Many companies do now stamp their products with their trademarks or some identifiable letters or numbers. This work has collected the imprints in a systematic fashion.

The U.S. Food and Drug Administration started publishing a *National Drug Code Directory* in 1969 (see entry 361). This publication contains codings for drugs, dosages, and manufacturers, and one of its uses is for identifying imprints on tablets and capsules. Its uses for this purpose, however, are limited. *Imprex* lists alphabetically the tablet imprints and identifies them with the name of the drug or drugs, manufacturer, country, strength of the tablet, color, and the like. It contains most of the imprints used in America, Europe, and Australia, and in addition, many house mark imprints used in other parts of the world, including Japan.

The *Imprex* list was first published in the *Pharmaceutical Journal* (see entry 891) in 1964.

205. **The Complete Handbook of Approved New Animal Drug Applications in the United States**. With an Introduction by Vader M. Loomis. Dallas, TX: Shotwell and Carr Publishers, 1981. 1 vol. looseleaf. \$230.00 initially, \$80.00 per year thereafter.

A comprehensive listing of all approved new animal drugs in the United States, this work provides information on new animal drug application (NADA) approval processes, currently approved active ingredients, and a cross-referenced listing of NADAs. The book is designed as a convenient guide to pharmaceutical products subject to an approved new drug application by the Bureau of Veterinary Medicine of the U.S. Food and Drug Administration. Reference is made to approximately 1245 products utilizing about 440 different active drug substances. The work is indexed in several ways. Also included is a discussion of the manner in which a drug product becomes the subject of an official government approval, and there is also a discussion of the conditions under which products are marketed.

The book contains: (1) A section on the new animal drug application approval process; (2) Section on new animal drug active ingredients; (3) Approved new animal drug applications in alphabetical order by sponsoring firms; (4) Approved applications in numerical order by FDA application number; (5) Approved new animal drug products by brand name; and (6) Approved new animal drug applications listed by name of animal.

206. Connors, Kenneth A., Gordon L. Amidon, and Lloyd Kennon. **Chemical Stability of Pharmaceuticals: A Handbook for the Pharmacist**. New York: John Wiley and Sons, 1979. 367p. illus. bibliog. index. \$39.50. LC 78-1759. ISBN 0-471-02653-0.

The purpose of this book is to assist the pharmacist in applying kinetic methods and data to stability problems in professional practice. The presentation is in two parts. The first part treats the calculations, approximations, and estimates that are useful in practical situations. Chapter headings for this section are: (1) Introduction; (2) Stability calculations; (3) Interpretations of kinetic data; (4) Hydrolysis and other acyl transfers; (5) Oxidation; and (6) Strategy and tactics of stability testing.

The second part is a collection of 30 stability monographs, each on a different common drug, with data taken from the literature. The following information is usually provided: drug names, structure, forms available, physical properties, stability summary, reactions and rate equation, pH-rate profile, activation energy, formulations and combinations (including degradation reactions and stabilization methods), and literature references.

207. Conte, John E., Jr., and Steven L. Barriere. **Manual of Antibiotics and Infectious Diseases**. 5th ed. Philadelphia, PA: Lea & Febiger, 1984. 351p. bibliog. index. \$18.50. LC 83-18725. ISBN 0-8121-0908-2.

Designed for students, housestaff, practicing physicians, and other health professionals who are involved in care of patients with infectious diseases, this manual incorporates material from a variety of sources.

There are eight sections, as follows: (1) Antibiotics (presents clinical information on about 75 drugs); (2) Empiric antibiotic therapy (recommends drugs of choice, alternative therapy, dosages, and route of administration for various situations); (3) Therapy of established infection (summarizes antibiotic choices, doses, route of administration, and duration of therapy); (4) Antibiotic sensitivity (mostly tabular data); (5) Prophylactic antibiotics (guidelines for use and recommendations for prevention of several diseases); (6) Availability and clinical use of immunobiologic agents and antiparasitic drugs (agents available from the Immunobiologics, Biologic Product Division, Bureau of Laboratories, of the Centers for Disease Control); (7) Viral hepatitis: clinical and serologic summary; and (8) Sexually transmitted diseases—treatment guidelines.

The book fills a gap between the pocket-sized manual and the encyclopedic-type textbook.

208. **Controlled Substances Handbook**. Edited by Kenneth Baumgartner. Oakton, VA: S. Cook, Inc. (P.O. Box 248, Oakton, VA 22124), 1975. Looseleaf. \$150.00. Updated by a newsletter, *Controlled Substances Quarterly*, and replacement pages. \$90.00 per year.

With the passage of the Controlled Substance Act in 1965 and the more stringent law, the Comprehensive Drug Abuse Prevention and Control Act in 1970, pharmacists have had to give more attention to controlled substances. This work is intended for persons concerned with the regulated drug industry, such as hospital administrators, physicians, manufacturers, distributors, and attorneys, as well as pharmacists. It contains an accurate and complete codified set of regulations promulgated by the Federal Bureau of Narcotics and Dangerous Drugs. Easy to understand explanations accompany each section of the regulations, and a codified, annotated version of the Controlled Substances Act is also included.

The large looseleaf notebook contains the following sections, which are periodically updated: (1) Introduction; (2) Registration of manufacturers, distributors, and dispensers of controlled substances; (3) Labeling and packaging requirements; (4) Quotas (schedules I and II); (5) Records, inventories, and reports; (6) Order forms (schedules I and II); (7) Prescriptions; (8) Miscellaneous; (9) Schedules; (10) Registration of importers and exporters of controlled substances; (11) Importation and exportation of controlled substances; (12) Administrative functions, practices, and procedures; (13) Comprehensive Drug Abuse Prevention and Control Act of 1970; (14) Comprehensive list of controlled substances; (15) *Controlled Substances Quarterly* (file of issues).

209. Dev, Sukh, Anubhav P. S. Narula, and Jhillu Singh Yadav. **CRC Handbook of Terpenoids: Monoterpenoids**. Boca Raton, FL: CRC Press, 1982. 2 vols. bibliog. index. \$225.00 the set. LC 80-24696. ISBN 0-8493-3601-5; 0-8493-3602-3.

About 1950 a new era in natural products chemistry emerged. It was aided by more effective techniques of separation and synthesis and more useful spectroscopic methods that resulted in the accumulation of knowledge about structures of natural products. This reference work pinpoints salient features of the known information about terpenoids in an easy-to-use form. Terpenoids are an important class of compounds because of the biologic role of many of its members.

The ultimate plan is to have a total of five sections published covering the following categories: (1) Monoterpenoids; (2) Sesquiterpenoids; (3) Diterpenoids; (4) Triterpenoids; (5) Sesterterpenoids, polyprenoids, and meroterpenoids. The two volumes under review cover the monoterpenoids reported in the literature up until the end of 1979.

Contents of Volume 1 are as follows: (1) General information and skeletal-type index; (2) Acyclic monoterpenoids; (3) General bibliography; and (4) Indexes (species and compound). Volume 2 contains: (1) General information and skeletal-type index; (2) Monocyclic monoterpenoids; (3) Bicyclic monoterpenoids; (4) Tricyclic monoterpenoids; (5) General bibliography; and (6) Indexes (species and compound).

The main part of each volume presents one page summarizing each compound. It includes isolation/identification, spectral data, biosynthesis, pharmacologic properties, known applications, and literature references.

210. Devon, T. K., and A. I. Scott. **Handbook of Naturally Occurring Compounds**. Volume I, **Acetogenins, Shikimates, and Carbohydrates**; Volume II, **Terpenes**; Volume III, **Alkaloids and Related Nitrogenous Compounds**. New York: Academic Press, 1972-. Volume 1, 644p. \$76.50; Volume 2, 576p. \$77.00. LC 76-187258. ISBN 0-12-213601-2 (Volume 1).

In an attempt to pool the chemical and biochemical data of natural products, the Card Index File of Naturally Occurring Compounds was conceived and initiated at the University of Sussex in 1966. This massive compilation is based on the information collected for that file.

The *Handbook* contains most of the known naturally occurring substances to which structures have been assigned. Each structure is stored in the *Handbook* with its name, molecular formula, molecular weight, optical rotation, melting point, literature reference (usually the latest), and classification code number. The arrangement of the work is by class of compound. Information on the compounds can be retrieved by using the alphabetical index or by structural type using the structural classification guides at the beginning of the listing of each class of compound. Molecular weight and molecular formula indices are provided with each volume.

The set has been considered very valuable by medicinal chemists involved in natural products research.

211. Dorr, Robert T., and William L. Fritz. **Cancer Chemotherapy Handbook**. London, England: Henry Kimpton Publishers, 1980. 795p. bibliog. index. £14.95pa. LC 80-11451. ISBN 0-85313-809-5.

The authors say that this text evolved out of their frustration in working with investigational and even commercially available anticancer agents for which much pertinent information was often not readily available. Therefore, in the Drug Data Sheet section, they have assembled practical information about the drugs, including such topics as detailed methods of administration for each agent, chemistry, activity, availability, storage, dosage, side effects, interactions, incompatibilities, precautions, and patient information. About 80 drugs are listed in this section, which makes up over half the book. Many literature references are included.

Other sections of the book include text material and tables on the following topics: pharmacologic consideration in cancer chemotherapy; complications and toxicities of cancer chemotherapy; administration of chemotherapeutic agents; and regulatory and medicolegal aspects of investigational cancer chemotherapy.

The book is quite useful for reference. The index includes types of cancer, as well as the names of the drugs.

212. Dreisbach, Robert H. **Handbook of Poisoning: Prevention, Diagnosis, and Treatment**. 11th ed. Los Altos, CA: Lange Medical Publications, 1983. 632p. bibliog. index. \$11.00pa. LC 82-83909. ISBN 0-87041-075-X.

This concise handbook covers the diagnosis and treatment of poisoning caused by chemical products used in agriculture, industry, the home, and medicine.

There are several sections: (1) General considerations; (2) Agricultural poisons; (3) Industrial hazards; (4) Household hazards; (5) Medicinal poisons; and (6) Animal and plant hazards. Inasmuch as is possible, chemically and, in some cases, pharmacologically related agents have been grouped together. To enable the physician to identify the toxic principle in a given proprietary preparation, brand names have been freely used, and such names are included in the general index. Potentially poisonous agents that have not been important in causing human poisoning are included in tabular form rather than as separate monographs.

In the section on medicinal poisons, the drugs are presented in classified arrangement, such as antiseptics, cardiovascular drugs, and so on. The monographs usually include the following information: description, clinical findings, prevention, treatment, prognosis, and literature references.

The book has been widely used, including use in drug information centers as well as in poison control centers. It has been translated into Spanish, Portuguese, Japanese, Polish, and Serbo-Croatian.

213. **Drug Identification Guide**. 6th ed. Oradell, NJ: Medical Economics, 1980. 116p. illus. (col). index. \$8.95pa. ISBN 0-87489-241-4.

This pocket-sized booklet contains actual size, color reproductions of more than 1000 of the most commonly prescribed drugs (tablets and capsules) and some available without prescription. Also included are illustrations of medicines in tubes, vials, and so forth.

The material has been taken from the *Physicians' Desk Reference* (see entry 335).

214. **Drug Store Market Guide.** Mohegan Lake, NY: Drug Store Market Guide (1739 Horton Ave., Mohegan Lake, NY 10547), 1981- . Annual. National edition, \$169.00; regional editions, \$57.00.

Intended for those who wish to sell more to drugstores and wholesalers, this guide provides an in-depth analysis of the 80 major markets that account for more than 90 percent of all drugstore sales. It includes information about important companies in each of these markets. Information provided includes: new sales facts and figures, updated market maps, drug chains and wholesalers who supply them, executive personnel and buyers, company sales data, type of products purchased, and warehouse receiving hours.

It is suggested that the guide can be used to identify the best prospects in the richest markets; sell more by reaching the people who can buy more; learn which wholesaler supplies which chain; establish realistic goals for the sales force; select test markets; analyze sales territories for effective coverage; develop a mailing list for new product introduction and promotion; and pinpoint the companies where distribution needs improvement.

215. Frohne, Dietrich, and Hans Jürgen Pfänder. **A Colour Atlas of Poisonous Plants: A Handbook for Pharmacists, Doctors, Toxicologists, and Biologists.** With a foreword by Otmar Wassermann; translated from the 2nd German edition by Norman Grainger Bisset. London, England: Wolfe Publishing Ltd., 1984. 291p. illus. (part col.). bibliog. index. \$58.00. ISBN 0-7234-0839-4.

Many plants contain substances that can lead to poisoning in man. Next to medicines and household chemicals, plants occupy third place in the statistics of Poison Control Centers where poisoning of children is concerned. Because it is not possible to provide effective treatment unless the plant is identified with certainty and its toxicity correctly estimated, the authors of this work felt there was a need for a book that offered more than a simple description of the plant.

Their book presents characteristic parts of plants that are known as poisonous, illustrated in color, and also plants whose fruits are harmless but which often give rise to enquiries. Further aids to identification are included such as descriptions, an identification key for fruits, and a compilation of leaf characters illustrated in black and white. Also, microscopic characters, especially those of the epidermis of the fruit wall, are also utilized as a possible means of recognition and differentiation. The older literature has been critically evaluated and newer investigations and reports reviewed. Plants included in the book for the most part originate in temperate zones and include those found in gardens and parks and as houseplants.

The book begins with a chapter on problems arising from poisoning by plants and also one on toxicologically significant plant constituents. Then the most important plants with alleged or actual toxic properties are presented, arranged by families. Information given about each plant includes level of toxicity, symptoms of poisoning, and suggested treatment. There is also a general discussion provided on most plant families. Appended is a section on British poisonous plants met with in veterinary practice.

216. **Geigy Scientific Tables.** Vol. 1, **Units of Measurement, Body Fluids, Composition of the Body, Nutrition.** 8th rev. and enl. ed. Edited by C. Lentner. West Caldwell, NJ: Ciba-Geigy Corporation, Medical Education Division, 1981. 295p. bibliog. index. \$19.95. LC 81-70045. ISBN 0-914168-50-9.

Earlier editions of this valuable work were one-volume compendia. The aim of the new multivolume edition is the same, to provide scientific researchers, teachers, or physicians with a concise compendium of scientific data backed by literature references.

Volume 1 is in four major sections. The first, "Units of Measurement," presents tables on units of length, time, and temperature and sections on acoustics, radioactivity, relative atomic masses, and physical constants. The second part, "Body Fluids," gives chemical composition, viscosity, pH, specific gravity, and freezing points of about 20 body fluids such as tears, gastric juices, synovial fluid, and bile. Part 3, "Composition of the Body," provides organic components of soft and hard tissues, electrolytes, renal function values, and basal metabolism. The last part, "Nutrition," gives the composition of foods, nutritional standards, and energy expenditures.

It is planned that the work will be in five volumes; some are still in preparation. Volume 2 is on statistics and mathematics; Volume 3 is on physical chemistry, hematology, and human biometrics. Other volumes are to cover biochemistry, inborn errors of metabolism, pharmacogenetics, endocrinology, circulation, and respiration.

217. Goldberg, Paula B., Jay Roberts, Richard C. Adelman, and George S. Roth, eds. **CRC Handbook on Pharmacology of Aging**. Boca Raton, FL: CRC Press, 1983. 258p. bibliog. index. (CRC Series in Aging). \$78.00. LC 82-17829. ISBN 0-8493-3145-5.

It has recently become evident that the pharmacologic aspects of aging require special investigation and attention. The manner in which the elderly respond to drugs may be different from that of the general population. Work on this book was undertaken for the purpose of compiling a comprehensive, current, and reliable information source on pharmacology as it relates to aging. It is intended to serve those using aging data in research, in the clinical setting, for education, for service, and in related areas.

Data on drugs and special pharmacologic considerations are organized into four sections: (1) General pharmacology; (2) Cardiovascular pharmacology; (3) Drugs acting on different components of the nervous system; and (4) Miscellaneous drugs. Data from human and animal studies are included.

Extensive bibliographies are included with each chapter.

218. Gosselin, Robert E., Robert P. Smith, and Harold C. Hodge. **Clinical Toxicology of Commercial Products**. With the assistance of Jeannette E. Braddock. 5th ed. Baltimore, MD: William & Wilkins, 1984. 2000p. bibliog. index. \$95.00. LC 83-1373. ISBN 0-683-03632-7.

The original purpose of this book was to assist the physician in dealing with acute chemical poisonings arising through misuse of consumer products. Over the years, another purpose of the manual has developed, that is, to acquaint therapists and others with the pathophysiologic mechanisms induced by various poisons. Consequently, documentation of case reports and clinical and experimental research papers are now included. Basically, the book provides a list of trade name products together with their ingredients; addresses and phone numbers of companies for use when descriptions of products are not available; sample formulas of many types of products with an estimate of their toxicity; toxicologic information on the toxicity of individual ingredients; and recommendations for treatment.

There are seven separately paged sections presented. Section 1, "First Aid and General Emergency Treatment," is a synopsis of the physician's role in chemical poisonings. Section 2, "Ingredients Index," contains an alphabetical list of ingredients commonly found in commercial products. Section 3, "Therapeutics Index," summarizes

clinical and experimental data on 85 compounds (or classes of compounds) which are named "reference congeners" in Section 2 because each typifies a group of related substances. Toxic signs and symptoms are pointed out and therapy recommended. Section 4, "Supportive Treatment," emphasizes problems frequently encountered. Section 5, "Trade Name Index," lists alphabetically over 15,000 trade name products that might be ingested accidentally. The ingredients are usually given with asterisks marking the components probably responsible for harmful effects. The manufacturer's name is included. Section 6, "General Formulations," presents formulas for various types of products listed in the trade name index. These are basic or typical and give guidance to physicians when the trade name of an ingested substance is unknown. Section 7, "Manufacturers' Index," provides names, addresses, and telephone numbers of the manufacturers of products appearing in the trade name index.

The book is very comprehensive, but the task of being all-inclusive is virtually impossible. The authors hope to develop further computerized versions of a now-existing database to assist in making the information available.

Pharmacists often need a book such as this. It is widely used in drug information centers, as well as in poison control centers.

219. Gupta, Ram N., ed. **Drugs**. Consulting editor: Irving Sunshine. Boca Raton, FL: CRC Press, 1981. 2 vols. (CRC Handbook of Chromatography). bibliog. index. \$69.00 per volume. LC 81-10157. ISBN 0-8493-3030-0 (the set).

This is one of a series of separate volumes devoted to a single class of chemical compounds or to compounds with a similar use pattern. Steroid drugs are not included in the work under review; they will be included in another volume of the series.

In the past decade, the most noted application of chromatography has been in the field of drug analysis. These volumes present information on the chromatographic techniques available for the analysis of drugs. Virtually all of the information provided is in tabular format, where the drug names are arranged alphabetically by their generic names. The information given includes specimen, sensitivity, column, packing, isothermal operation, detector, retention time, internal standard, derivative, reference, elution, flow rate, plate solvent, and postseparation treatment. The work also has a section on preparation of samples and an appendix of molecular weights of the drugs.

220. Iversen, Leslie L., Susan D. Iversen, and Solomon H. Snyder, eds. **Handbook of Psychopharmacology**. New York: Plenum Publishing, 1975-. illus. bibliog. index. LC 75-6851. ISBN 0-306-38921-5 (volume 1).

This multivolume monographic set presents definitive reviews on topics of interest to psychiatrists, psychopharmacologists, neuropharmacologists, and psychologists. The material in this field has grown rapidly of recent years, and this work will assist interested individuals in keeping up to date.

The work is divided into sections, each consisting of several volumes. Section headings are: (1) Basic neuropharmacology; (2) Behavioral pharmacology in animals; and (3) Human psychopharmacology.

Volume titles to date are: (1) Biochemical principles and techniques in neuropharmacology; (2) Principles of receptor research; (3) Biochemistry of biogenic amines; (4) Amino acid neurotransmitters; (5) Synaptic modulators; (6) Biogenic amine receptors; (7) Principles of behavioral pharmacology; (8) Drugs, neurotransmitters, and behavior; (9) Chemical pathways in the brain; (10) Neuroleptics and schizophrenia; (11) Stimulants; (12) Drugs of abuse; (13) Biology of mood and antianxiety drugs; (14) Affective disorders: drug actions in animals and man; (15) New techniques in

psychopharmacology; (16) Neuropeptides; (17) Biochemical studies of CNS receptors; and (18) Drugs, neurotransmitters, and behavior.

221. Kline, Nathan S., and Jean-Pierre Lindenmayer. **Psychotropic Drugs: Manual for Emergency Management of Overdosage**. 2nd ed. Oradell, NJ: Medical Economics, 1981. 126p. illus. (col.). bibliog. \$16.95pa. LC 80-25211. ISBN 0-87489-210-4.

This pocket-sized manual was designed to help physicians, nurses, and first-aid emergency squads deal with a patient who has received an overdose of a psychotropic drug. This kind of drug is often purchased illicitly on the street. The book spells out what lifesaving actions should be taken for each symptom of overdose, describes the clinical signs and symptoms for major drug classifications, and recommends appropriate treatment.

The actions that nonmedical trained personnel may take and the treatment they may safely administer are indicated separately from those suitable only for physicians or trained individuals to use.

The main sections of the manual are: (1) A discussion of the treatment of severe complications; (2) A discussion of the mechanisms of drug elimination; (3) Clinical signs and treatment arranged by the various classes of drugs; (4) A table of drugs giving type, uses, manufacturer, street names, and packaging data; (5) A table of approximate child and youth doses; (6) Identifying color photographs of psychotropic drugs; and (7) A list of Poison Control Centers arranged alphabetically by state.

This concise, effective manual should help save many lives. The problem dealt with is a serious one because many deaths occur each year from drug overdose. The material presented is authentic; the senior author is a noted clinician, educator, and researcher.

222. Marmion, Daniel M. **Handbook of U.S. Colorants for Foods, Drugs, and Cosmetics**. 2nd ed. New York: John Wiley and Sons, 1984. 466p. illus. bibliog. index. (A Wiley-Interscience Publication). \$50.00. LC 83-17017. ISBN 0-471-09312-2.

Since the first edition of this handbook appeared in 1979, there have been numerous important changes in the field of color additives. The identity, status, and permitted areas of use of many of the additives have been changed, and analytic technology has been improved. This new edition documents these changes while still maintaining the original goal of the work, which is to provide a manual on color additives that would be useful to all interested individuals. Analytic procedures that might be useful as teaching aids have been included.

The work is in three parts: (1) History, regulation, description, and use; (2) Colorant analysis; and (3) Resolution of mixtures and analysis of commercial products. The chapter headings are: (1) History; colorants in use today; (2) Areas of use; (3) Regulations governing use; (4) Certified colorants; (5) Colorants exempt from certification; (6) Identification; (7) Determination of strength; (8) Insoluble matter; (9) Inorganic salt content; (10) Metals; (11) Organic impurities; (12) Uncombined intermediates and other low-molecular-weight impurities; (13) Homologous, isomeric, and other related colorants; (14) Resolution of mixtures; and (15) Analysis of commercial products. There are also several appendices to Part 1, as follows: (1) Colorant specifications; (2) Some domestic suppliers of color additives; (3) Glossary; and (4) A guide for obtaining the listing by FDA of a proposed new color additive.

The literature references included are extensive.

223. Mason, Aaron S., and Robert P. Granacher. **Clinical Handbook of Antipsychotic Drug Therapy**. New York: Brunner/Mazel, 1980. 329p. bibliog. index. \$30.00. LC 80-11235. ISBN 0-87630-215-0.

Antipsychotic drugs are primarily responsible for widespread changes and reforms in mental health care, but there have been few if any comprehensive works published similar to this one. It is devoted to the clinical application of the drugs. Detailed instructions are provided on handling the patients and their medication. The authors, who are psychiatrists, feel there has been a gap in this area of the psychopharmacologic literature and that this book will fill it. It is intended primarily for general practitioners, medical students, and residents in psychiatry, although nurses and other mental health care professionals may be interested in it.

Chapter headings are: (1) Introduction to antipsychotic drugs; (2) Basic principles of antipsychotic drug therapy; (3) Rapid tranquilization methods; (4) Further clinical applications of antipsychotic drug therapy; (5) Side effects of antipsychotic drugs and their management; and (6) Lithium therapy.

224. **The Merck Manual of Diagnosis and Therapy**. 14th ed. Edited by Robert Berkow. Rahway, NJ: Merck Sharp & Dohme Research Laboratories, division of Merck & Co., 1982. 2578p. index. \$19.75. LC 1-31760. ISBN 911910-03-4. ISSN 0076-6526.

The purpose of this manual, which first appeared in 1899, is "to provide useful information to practicing physicians, medical students, interns, residents, and other health professionals." Surprisingly, because the language is really too technical for the average reader, the manual has been widely used by laypersons. It covers concisely all but the most obscure diseases.

The material is divided by type of disease. The chapters provide an overview or review of a disorder, its pathology, and current treatment approaches. The disorders are described, and their etiology, pathology, signs and symptoms, laboratory findings, diagnosis, prognosis, treatment, and perhaps prophylaxis covered. Drugs are designated in the text by generic name.

Also included in the manual are some special chapters, including the specialty areas of obstetrics, gynecology, pediatrics, and genetics. There is also a clinical pharmacology section and a section on poisoning and venomous bites and stings.

Within the clinical pharmacology section there are separate chapters on drug absorption and bioavailability, drug distribution, pharmacokinetics and drug administration, drug elimination, plasma concentration monitoring, mechanism of drug action, modification of drug response, drug toxicity, patient compliance, placebos, and several chapters reviewing different drug categories.

225. **The Merck Veterinary Manual: A Handbook of Diagnosis and Therapy for the Veterinarian**. 5th ed. Edited by Otto H. Siegmund. Rahway, NJ: Merck & Co., 1979. 1680p. index. LC 61-12679. ISBN 911910-52-2; ISSN 0076-6542.

The Merck Manual of Diagnosis and Therapy (see entry 224) for physicians served as a model for this work for veterinarians. It has been accepted by veterinarians worldwide as an authoritative handbook of diagnosis and therapy of animal diseases.

The first section, a little more than half the book, takes up diseases by type. Included are descriptions, etiology, clinical findings, diagnosis, prognosis, prophylaxis, and treatment. Other sections of the manual cover toxicology; poultry; fur, laboratory and zoo animals; nutrition; behavior; diagnostic procedures; and prescriptions.

The prescription section lists drugs by class with dosages provided for various animals.

226. **Perry's Chemical Engineers' Handbook.** 6th ed. Prepared by a staff of specialists under the editorial direction of late editor, Robert H. Perry; editor: Don W. Green; assistant editor: James O. Maloney. New York: McGraw-Hill, 1984. 2336p. index. \$65.00. (McGraw-Hill Chemical Engineering Series). LC 84-837. ISBN 0-07-049479-7.

The classic standard handbook in the field of chemical engineering, this work also has been used extensively in the area of pharmaceutical manufacturing. Written and compiled by more than 100 experts, the handbook is authoritative, accurate, dependable, useful, and comprehensive. It covers basic techniques and latest equipment and technology.

The 27 separately paged sections cover conversion factors; mathematics; physical and chemical data; reaction kinetics, reactor design, and thermodynamics; fluid and particle mechanics; transport and storage of fluids; handling of bulk solids and packaging of solids and liquids; size reduction and size enlargement; energy utilization, conversion, and resource conservation; heat transmission; heat-transfer equipment; psychrometry, evaporative cooling, refrigeration, and cryogenic processes; distillation; mass transfer and gas absorption; liquid-liquid extraction; adsorption and ion exchange; novel separation processes; liquid-gas systems; liquid-solid systems; solids drying and gas-solid systems; solid-solid systems and liquid-liquid systems; process control; materials of construction; process machinery drives; process economics; waste management; biochemical engineering.

This sixth edition is the fiftieth anniversary edition of the handbook.

227. **Pharmaceutical Handbook: Incorporating the Pharmaceutical Pocket Book.** Produced in the Department of Pharmaceutical Sciences, the Pharmaceutical Society of Great Britain. 19th ed. Edited by Ainley Wade. London, England: The Pharmaceutical Press, 1980. 784p. bibliog. index. \$35.00. ISBN 0-85369-130-4.

The *Handbook* first appeared in 1906 under another title, the *Pharmacy Students' Pocket Note-Book*. After undergoing several changes in title, scope, and size, in 1970 it was given the current title and was called "A Martindale Companion Volume" (see entry 105 for a description of *Martindale*).

The work is designed to be a practical volume for the use of students, technicians, practicing pharmacists, and practitioners of the allied health professions. It presents compressed information that could only be found by consulting numerous other sources.

The following sections are included: (1) The preparation and supply of medicines; (2) Computers and their applications; (3) Book list; (4) Sterilisation; (5) Disinfectants and antiseptics; (6) Hydrometers; (7) Dilution of alcohol; (8) Hydrogen ion concentration; (9) Isotonic and iso-osmotic solutions; (10) Millimoles, milliequivalents, and units of concentration; (11) Electrolyte and water replacement; (12) Physiological values for some body fluids; (13) Drug absorption; (14) Food and diet; (15) Poisoning; (16) Bites and stings; (17) Removal of stains; (18) Microbiology; (19) Immunology; (20) Nomenclature of organic compounds; (21) Weights and measures; (22) Miscellaneous data; (23) Glossary of proprietary names and equivalent approved names; and (24) Glossary of medical and pharmaceutical terms.

228. **The Pharmacists' Guide to the Controlled Substances Act of 1970.** Arlington, VA: Controlled Substances Information, Inc. (P.O. Box 5554, Arlington, VA 22205), 1972. 107p. LC 72-89817.

The purpose of this manual is to assist the pharmacist in complying with the requirements of the Federal Controlled Substances Act as the law is applied by the Federal Bureau of Narcotics and Dangerous Drugs. Requirements of the states have not been covered. The material presented has been extracted from the *Controlled Substances Handbook* (see entry 208).

229. **Prescription Drug Industry Fact Book.** Washington, DC: Pharmaceutical Manufacturers Association (1155 Fifteenth St., NW, Washington, DC 20005). 1962-. Irregular.

A reference guide for persons interested in information about the prescription drug industry, this publication also provides summary data about medical devices and diagnostic products industries, as well as the pharmaceutical industry. There are usually eight chapters presented: (1) The U.S. health care industry; (2) The prescription drug industry; (3) Innovation—research for better health; (4) Industry structure; (5) Employment, productivity, and energy conservation; (6) International operations; (7) Inflation and prescription prices; and (8) Medical devices and diagnostic products.

Included are data, much of it in tabular and graphic format, about sales, distribution, research and development expenditures, manpower, new drugs, patent activity, earnings, employment, prices, and government regulation. Sources of the data are included.

230. Raffauf, Robert F. **A Handbook of Alkaloids and Alkaloid-Containing Plants.** In association with Smith Kline and French Laboratories, Philadelphia. New York: Wiley-Interscience, a division of John Wiley and Sons, 1970. not paged. bibliog. LC 73-113713. ISBN 471-70478-4.

The author of this compilation is a professor of pharmacognosy. Making use of a computer, he has listed what was known about alkaloids through mid-1968. There is no interpretation of the data included. The material is presented in long, computer-produced tables.

The main body of the work, "Table of Alkaloids by Family," gives the plant source, formulas, and physical properties of the known alkaloids, arranged in alphabetical order by the plant family name. The following data are usually included for each alkaloid: (1) Name and structure; (2) Botanic family and genus of origin; (3) Molecular formula; (4) Molecular weight; (5) Melting point; (6) Optical rotation; and (7) Literature citations.

There are a number of cross-reference tables: alkaloid index, index of genera, molecular formula index, molecular weight index, structure tables, and atlas of structure.

There are no page numbers in any section, but the book is thumb-indexed to help in the location of specific tables.

231. Schauenberg, Paul, and Ferdinand Paris. **Guide to Medicinal Plants.** From a translation by Maurice Pugh Jones. Color illustrations by Violette Niestle; line illustrations by Paul Schauenberg. Guildford and London, England: Butterworth Press, 1977. 349p. plus 39 plates. illus. (part col.). index. ISBN 0-7188-2261-7.

This guide presents over 400 plants grouped according to active constituents. About 230 of them are shown in the color plate section, and there are line drawings throughout the text.

Chapter headings are: (1) Plants containing alkaloids; (2) Vitamins; (3) Antibiotics; (4) Sulphur heterosides; (5) Cyanogenic heterosides; (6) Simple phenolic heterosides; (7) Flavonoids; (8) Coumarin heterosides; (9) Ranunculoides; (10) Anthracenoides; (11) Tannin; (12) Bitter compounds; (13) Cardenolides; (14) Saponosides; (15) Essential oils and resins; (16) Acids; (17) Mucilages (glucides); (18) Inorganic compounds; and (19) Plants from other continents. There is a section on the collection and use of medicinal plants, a section on famous figures in the history of medicines, glossaries of botanic terms and therapeutic terms, a list of abbreviations used in herbalism, and a list of maladies and treatments.

Each plant monograph provides botanic common English, French, and German names; habitat; description; flowering season; active constituents; properties; application; parts used; collecting season; toxicity (if any); and historical information.

This is a rather extensive and informative work, originally published in French.

232. Shader, Richard I., ed. **Manual of Psychiatric Therapeutics: Practical Psychopharmacology and Psychiatry**. Boston, MA: Little, Brown, 1975. 362p. bibliog. index. \$15.95pa. LC 75-1487. ISBN 0-316-78220-3.

Over the past 20 years advances in clinical psychopharmacology have brought about changes in the care of the emotionally ill. The purpose of this manual is to offer clinicians and students an overview of current clinical therapeutics.

Following are the chapter headings: (1) Psychotropic drugs in the general hospital; (2) The psychopharmacological treatment of anxiety states; (3) The classification of treatment of depressive disorders; (4) Approaches to schizophrenia; (5) The treatment of manic-depressive states; (6) Electroconvulsive therapy; (7) Management of violent patients; (8) Therapy of psychiatric disorders of childhood; (9) Diagnosis and management of minimal brain dysfunction; (10) Psychopharmacology and the geriatric patient; (11) Bad trips; (12) Treatment of dependence on barbiturates and sedative-hypnotics; (13) Heroin and methadone abuse: acute and chronic management; (14) Treatment of the alcohol withdrawal syndrome; (15) Psychotropic drug overdose; (16) Drug interactions in psychopharmacology; (17) The borderline state: psychopharmacological treatment approaches to the undiagnosed case; (18) Hypnosis; (19) Practical dietary considerations; and (20) Assessment of suicide risk. Appendices include pertinent data on hypnotics, sedatives, and major tranquilizers; a list of over-the-counter hypnotic preparations that contain anticholinergic substances; and a comparison of classes of major tranquilizers.

233. Shirkey, Harry C. **Pediatric Dosage Handbook**. Washington, DC: American Pharmaceutical Association, 1980. 313p. index. \$18.00. LC 80-66856. ISBN 0-917330-33-1.

This work is an essential reference source for practicing health science personnel such as physicians, dentists, nurses, and pharmacists and also for students preparing to enter these professions. Introductory material about dosage is presented, particularly as applied to the complex problem of dosage for infants and children. The main part of the publication, however, is a list of drug monographs providing such information as drug category, dose, contraindications, precautions, adverse reactions, trade names, and dosage forms. Arrangement is by generic name. The doses are related to body weight and body surface area.

Other materials included are a nomogram for estimating surface areas; a graph showing weight, surface area, and dose relationships; a list of drugs by pharmacologic categories; a table of pharmacokinetics of anticonvulsants; a table of preoperative medication for children; and a table of gram equivalents of pounds and ounces for newborns.

The publication fills a void in the drug literature because information regarding the dose of a particular drug for children is rather limited.

234. Silverman, Harold M. **The Consumer's Guide to Poison Protection**. New York: Avon, 1984. 307p. bibliog. index. \$9.95pa. LC 84-45253. ISBN 0-380-88682-0.

Silverman, a pharmacist, has provided the information needed to deal with common poisons and some that are not so common. The book does not take the place of the advice of a physician, hospital emergency room, or poison control center but does offer advice on aspects of possible poisoning that may help the consumer.

Chapter 1, "What is Poisoning?" distinguishes between some common poisons and some nontoxic substances. Chapter 2, "Who is Most Likely to be Poisoned?" points out the most common age, time, and place and the most common drugs, chemicals, and plant poisons. Chapter 3, "What Can You Do to Help?" discusses what can be done before one goes to the emergency room and how one deals with possible poisoning from unknown substances and from strange plants. Chapter 4, "Poison Information Reference Sections," makes up most of the book. In it drugs are listed by type (such as antihistamines, anticoagulants, hormones, and so on) with products named. Brief monographs are presented on each drug with the following information usually provided: other brand names, type, ingredients, toxic dose, lethal dose, mechanism of action, symptoms, treatment, and special notes. Chemicals such as fertilizers, herbicides, and household products are treated in the same fashion. Monographs on animal bites and plant poisons provide descriptions, symptoms, and treatment. Chapter 5 is on food poisoning, and Chapter 6 is on poison protection. There is an index by proprietary and generic and trade names.

Appended is a list of U.S. poison control centers, by state and city, a feature of value to the consumer when an emergency arises.

235. Skeel, Roland T., ed. **Manual of Cancer Chemotherapy**. Boston, MA: Little, Brown, 1982. 279p. bibliog. index. \$14.95pa. LC 82-81884. ISBN 0-316-79572-0.

It is difficult for both primary care physicians and laypersons to understand cancer chemotherapy. The purpose of this book is to provide physicians who are not oncologists with a manual that will help them care for patients who have cancer, especially those who are receiving chemotherapy. In some instances primary care physicians may be able to direct and administer chemotherapy; in other cases the treatment is so complex, the toxicity so severe, and the dosage so critical that an oncologist should both direct and administer the drugs. In still other cases, a joint management program may be carried out. No matter what the circumstance, this is a good manual for the nononcologist physician and other interested professionals.

There are 25 chapters arranged under these general headings: (1) Basic principles and considerations of rational chemotherapy; (2) Chemotherapeutic agents; (3) Chemotherapy of human cancer; and (4) Selected aspects of supportive care of patients with cancer. The section on chemotherapeutic agents is a long one; the drugs are first discussed in groups, then monographs on each are presented arranged alphabetically and with the following information usually provided: other names, mechanism of action, primary indication, usual dosage and schedule, special precautions, toxicity,

and miscellaneous effects. The next section discusses treatment by the types of cancer such as carcinoma of the lung, leukemias, and so on.

236. Soderman, Jean V., ed. **CRC Handbook of Identified Carcinogens and Noncarcinogens: Carcinogenicity-Mutagenicity Database**. Volume 1, **Chemical Class File**. Volume 2, **Target Organ File**. Boca Raton, FL: CRC Press, 1982. 2 vols. bibliog. index. \$295.00 (the set). LC 82-1222. ISBN 0-8493-3200-1 (the set).

The purpose of this computer-generated handbook is to identify by chemical structure substances that have been evaluated as carcinogens and noncarcinogens and to indicate which of these are genotoxic. It makes available for ready reference a compilation of data on 811 compounds, most of it taken from the monographs of the International Agency for Research on Cancer or reports of the National Cancer Institute Bioassay Program.

The 811 chemicals have been classified in a chemical class file and a target organ file. The chemical class file provides a comprehensive structural subdivision of the compounds. The target organ file includes 97 tumor sites. Each volume includes a bibliography file with keyword, citation, and author index; a Chemical Abstracts Service (CAS) Registry Number index; and a subject index.

237. Stahr, H. M., ed. **Analytical Toxicology Methods Manual**. Ames, IA: Iowa State University Press, 1977. 315p. illus. bibliog. index. \$10.50. LC 76-50849. ISBN 0-8138-1625-4. **Supplement to Analytical Toxicology Methods Manual with Cumulative Index**. 1980. 311p. illus. bibliog. index. \$18.00pa. ISBN 0-8138-1626-2.

This useful manual and its supplement were compiled at the Chemistry Laboratory, Veterinary Diagnostic Laboratory at Iowa State University. The volumes contain analytic toxicology methods the editor, authors, and contributors found to be of proven value. The philosophy of the group has been to work for better methods and certified collaborative samples that can be used by laboratories to check themselves for quality assurance. The supplement was written to provide additional information on the experience the laboratory had after the main volume was written.

The main volume includes these parts: (1) Sample requirements; (2) Atomic absorption methods of analysis; (3) Inorganic moieties; (4) Volatile metals; (5) Pesticides; (6) Mycotoxins; (7) Alkaloids, drugs, and feed additives; (8) Fluoroacetate (1080) and warfarin; and (9) Clinical chemistry.

The supplement contents is as follows: (1) General analytic procedures; (2) Inorganic moieties; (3) Volatile metals; (4) Pesticides; (5) Mycotoxins; (6) Antibiotics, drugs, and feed additives; (7) Rodenticides; and (8) Clinical chemistry.

238. Sunshine, Irving, and Michael Coplis, eds. **CRC Handbook of Mass Spectra of Drugs**. Boca Raton, FL: CRC Press, 1981. 457p. bibliog. index. (CRC Series in Analytical Toxicology). \$80.00. LC 80-22188. ISBN 0-8493-3572-8.

This comprehensive handbook is a compilation of data of mass spectra of drugs designed especially for use in analytic laboratories to aid in the complete interpretation of mass spectrometry data. Mass spectrometry has become an important analytic tool, particularly in toxicologic analyses where the toxicant is a trace component in a complex biologic matrix.

The introductory section of the book presents a general discussion of mass spectrometry. The other sections present data in these sections: (1) Eight-peak index of EI spectra arranged in increasing order of major peaks; (2) Molecular weight index for

EI and CI data; (3) CI data—alphabetical index; (4) EI data—alphabetical index; and (5) EI curves and data forms arranged by ascending major peaks.

The last section, the main one, presents over 550 mass spectra curves. The comprehensive index at the end of the volume includes all drug names.

239. Sunshine, Irving, ed. **Handbook of Analytical Toxicology**. Cleveland, OH: Chemical Rubber Co., 1969. 1081p. bibliog. index. \$66.00. LC 69-20046. ISBN 0-8493-3551-5, formerly 0-87819-513-3.

This handbook brings together much information essential to those concerned with the analysis of drugs, environmental hazards, economic poisons, and industrial chemicals. In addition, it presents summaries of published methods for their detection in biologic specimens. Included also are data on human absorption, excretion, and metabolism.

The book has three main sections. The first section lists drugs, economic poisons, and industrial chemicals in separately alphabetized parts to allow the reader to locate data on a given substance. There are also discussions on air pollutin and water analysis in this part of the volume. Section 2 is a sequential tabulation of physical properties of substances. The tables are designed to facilitate the identification of unknown substances whose physical properties have been elaborated during the course of an analysis. Section 3 presents a brief discussion of some physical methods of instrumental analysis and their application to substances of toxicologic interest. Extensive bibliographic appendices are included. The last section is a group of indices: drugs, economic poisons, industrial chemicals, and general.

The material included in the volume is of most value to analysts and to those who interpret analytic results such as physicians, pharmacologists, toxicologists, industrial hygienists, and scientists in the drug industry and governmental agencies.

240. Sunshine, Irving, ed. **Methodology for Analytical Toxicology**. Boca Raton, FL: CRC Press, 1975-1982. 2 vols. bibliog. index. \$45.00 per volume. LC 74-30747. ISBN 0-87819-716-8 (Volume 1); 0-8493-0717-1 (Volume 2).

This publication, especially the first volume, replaces an earlier publication called the *Manual of Analytical Toxicology* (1971). It presents procedures valuable for those concerned with the analysis of specimens for any medication suspected to be the cause of an illness. Over 100 substances, including therapeutic and drugs of abuse, heavy metals, and organic volatile substances, are included in the listing.

Volume 1 is in two main sections. The first section, methods for specific substances, lists the substances alphabetically and outlines the methods. For each substance two or three procedures are described in detail. Section 2 describes screening procedures. Some are simple direct qualitative tests, and some are more involved procedures such as spectrophotometry and gas chromatography.

Volume 2 of the work is a supplement featuring approximately 300 substances, including volatiles, neutral and acidic drugs, antibiotics, anticonvulsants, antidepressants, and drugs of abuse. Volume 2 contains compounds that can now be reliably analyzed by techniques and procedures that were not available at the time the first volume was published. One or two procedures are described for each substance.

The descriptions in each volume usually include principle, apparatus, reagents, procedure, calculation, interpretation, accuracy and precision, interfering substances, and literature references.

241. Sunshine, Irving, and S. R. Gerber. **Spectrophotometric Analysis of Drugs Including Atlas of Spectra**. Springfield, IL: Charles C. Thomas, 1963. 235p. index. \$25.75. LC 62-10166. ISBN 0-398-04420-1.

The ultraviolet and infrared absorption data of 150 drugs are presented in this volume. No narcotic drugs have been included because they are already well documented in the literature. Also included in the work is a technique for isolating new drug substances from blood in adequate amounts for analysis. This extraction procedure can be applied to urine or stomach contents also.

The first section of the book is an index of ultraviolet absorption spectra, an index of acids, an index of bases, and a list of "no characteristic ultraviolet absorption peaks in acid or base." Chapter 1 presents text material on screening procedures. Chapter 2 presents ultraviolet absorption spectra, and Chapter 3 presents the infrared absorption spectra. Drug names are listed in the index by generic, trade, and synonyms in common use.

242. Sunshine, Irving, ed. **CRC Handbook of Spectrophotometric Data of Drugs**. Boca Raton, FL: CRC Press, 1981. 479p. bibliog. index. (CRC Series in Analytical Toxicology). \$78.00. LC 80-22117. ISBN 0-8493-3571-X.

Useful information is presented in this handbook on physical methods for characterizing the structure of molecules and for identifying unknown substances whose spectra have been obtained during analysis. Tabular and text material are both included.

The material is presented in these sections: (1) Ultraviolet-visible spectrophotometry; (2) Infrared spectroscopy; (3) Fluorescence and phosphorescence spectroscopy; and (4) Atomic absorption spectrometry.

Compounds with similar ultraviolet properties can be identified by comparing ultraviolet absorption curves of the unknown compound with tabulated data provided. Data on known substances are arranged by ascending wavelengths of their maximum absorption and are also classified by molecular structure and absorption properties.

To assist in identification by using infrared spectra, the array of infrared spectra of drugs is arranged sequentially by major peaks.

The section on fluorescence and photophorescence spectroscopy covers aspects of luminescence spectroscopy, the instrumentation and experimental conditions that are most suitable, and structural considerations. Analyses commonly used in toxicology and a table of fluorimetric properties of a large number of compounds of toxicologic interest are included.

There are two indices on subject and physical properties.

243. Swonger, Alvin K., and Larry L. Constantine. **Drugs and Therapy: A Handbook of Psychotropic Drugs**. 2nd ed. Boston, MA: Little, Brown, 1983. 431p. illus. bibliog. index. \$18.95pa. LC 83-80284. ISBN 0-316-82551-4.

Suitable for use as a textbook and also as a reference guide, this work explains the role of drugs in psychotherapy. It draws from several disciplines, including medicine, psychology, and pharmacology.

There are 28 chapters, grouped into eight sections as follows: (1) Drugs in therapeutic perspective; (2) Foundations of drug action: neuropharmacology; (3) Drug use, drug abuse; (4) Drugs and arousal state; (5) Psychiatric disorders and drugs; (6) Motor function and drugs; (7) Pain and its drug management; and (8) Drugs and consciousness. Generally speaking, the drugs considered are treated in classes, and drug synopses are included at the ends of relevant chapters. These synopses provide essential

information about the drugs covered in the chapter, including generic and other commonly used names, major or unusual applications of the drug, and typical dosages. The dosage information is intended for reference use only, not for medical purposes either as a guide to or as a check against drug administration. There are several appendices, including a list of psychotropic drugs in the top 200 of all new and refill prescriptions in 1972 and 1981 and a list of some adverse reactions of potential psychotherapeutic significance.

244. Tallarida, Ronald J. **The Top 200—1984: A Guide to the Most Widely Prescribed Drugs in America**. Philadelphia, PA: W. B. Saunders, 1984. 283p. bibliog. \$15.50pa. ISBN 0-7216-1263-6.

A pocket-sized guide, this frequently revised compendium lists the 200 most frequently prescribed drugs with pharmacologic and therapeutic information. Summaries, based on the annual National Prescription Audit (see entry 90), are included.

The drugs are listed alphabetically by brand name. Information provided in each monograph includes manufacturer, other names, rank order, indications, preparations, dosage, contraindications and precautions, adverse reactions, and literature references. Special sections include a classified list based on pharmacologic action and/or therapeutic use, a generic index, and the top 200 in rank order.

The 1985 edition of this publication will have the title *Most Prescribed Drugs—1985*.

245. Thomas, Harry E. **Handbook of Pharmaceutical and Clinical Measurement and Analysis**. Reston, VA: Reston Publishing, 1977. 320p. illus. index. LC 77-22878. ISBN 0-87909-335-8.

Intended especially for use by technical personnel associated with the clinical pharmaceutical regime, this work deals mainly with equipment. The measurement and identification of drugs and bodily compounds are covered. Background material provided includes the basics of organic and inorganic chemistry, but the emphasis of the work is on electronics and mechanics.

The early chapters emphasize a generalized technical measurement approach applying to drug assay and clinical analysis. The later chapters consist of hardware and operational descriptions. There is material for maintenance and/or repair technicians and also for supervisory, administrative, purchasing, and/or diagnostic personnel. Much of the material is presented in tables.

Chapter headings: (1) Clinical and pharmaceutical assay regimens; (2) Types and properties of pharmaceutical substances; (3) Inorganic drug chemistry; (4) The gaseous, liquid, and solid states of matter; (5) Organic chemistry; (6) General measurement methods in drug assay and analysis; (7) Instrument measuring methods in pharmaceutical drug analysis; (8) Clinical chemistry analysis and measurement methods; (9) Basic-column chromatographic methods and equipment; (10) Thin-layer, electro-, and paper chromatography; (11) Spectrometry, spectrophotometry, and colorimetry; (12) X-ray analysis methods and electron spectroscopy; (13) Optical and electron microscopy; (14) Radioisotopes in pharmacy and clinical analysis.

246. Wagner, H., S. Bladt, and E. M. Zgainski. **Plant Drug Analysis: A Thin Layer Chromatography Atlas**. Translated by Th. A. Scott. New York: Springer-Verlag, 1984. 320p. illus. (col.). bibliog. index. \$63.10. LC 84-5348. ISBN 0-387-13195-7.

Thin-layer chromatography is the most widely used of the chromatographic methods for the analysis of mixtures. It is an ideal analytic method for plant drugs and for preparations that contain drug extracts or pure drug constituents. A disadvantage of the technique has been the lack of a satisfactory method of recording results permanently. To make documentation satisfactory, the authors of this work have made photographic reproductions of thin-layer chromatographic separations of drugs in visible and ultraviolet light and have reproduced the photographic recordings that are the most representative chromatograms of the common commercial drugs. Their hope is that their book will make possible the systematization of the identification and purity control of plant drugs. About 170 colored photographs are included along with adequate text material.

The following sections are presented: essential oil drugs (aetherolea), alkaloid drugs, drugs containing anthracene derivatives, arbutin drugs, bitter principle drugs, coumarin drugs, flavonoid drugs, cardiac glycoside drugs, saponin drugs, drugs containing pungent principles, mustard oil drugs and allium, narcotic drugs, drugs containing valepotriates, drugs containing pigments, drugs with miscellaneous constituents, TLC screening of an unknown commercial drug, TLC analysis of herbal drug mixtures, and spray reagents.

The book should prove to be a valuable aid for those involved with drug production and analysis, including pharmacists, chemical and pharmaceutical researchers and technicians, drug importers and exporters, governmental chemical control agencies, and health authorities.

11 Drug Compendia

As can be seen from the number of reference works listed in this section (about 120), there are many publications that list drugs. Although pharmacists make use of them all, some are intended primarily for other health care professionals such as physicians, nurses, veterinarians, and dentists. There are also a number for consumers. Most of the books are valuable, although there is much overlapping of coverage. Drug compendia are important publications, especially so because of the emerging role of the pharmacist in providing drug information to other health care professionals and to the patient. It is worth noting that one needs a large collection of compendia of this kind to do reference work on drugs. No one publication provides all the information that is needed.

Publications that list drugs are usually arranged in one of two ways: by drug orientation or by disease orientation. Those that are probably of most use to the pharmacist are drug oriented. This type usually covers a large number of drugs, has a system of cross-indexing of generic and brand names, and provides statements of composition, manufacturer, action, uses, administration, dosage, precautions, side effects, and dosage forms. Some are concise in style, but others provide longer descriptions and discussions. Examples include *American Drug Index* (entry 251), one of the most concise; *Kastrup's Facts and Comparisons* (entry 302); *American Hospital Formulary Service, Drug Information* (entry 253); and *Modern Drug Encyclopedia and Therapeutic Index* (entry 316). The publications that are disease oriented are arranged by disease state or body system rather than by drug or drug class. Examples include *Conn's Current Therapy* (entry 269) and *Shirkey's Pediatric Therapy* (entry 345). They are probably of most value to physicians.

Examples of other books intended primarily for physicians include: *AMA Drug Evaluations* (entry 247), *Bressler's The Physicians' Drug Manual* (entry 259), and the *Physicians' Desk Reference* (entry 335), although the latter is also widely used by other

health care professionals. Books especially intended for nurses include Albanese's *Nurses' Drug Reference* (entry 250), Clayton's *Mosby's Handbook of Pharmacology in Nursing* (entry 266), and Loeb's *The Nurse's Drug Handbook* (entry 306). Examples of titles for the veterinarian include Spinelli's *Drugs in Veterinary Practice* (entry 350), *Veterinarians' Product and Therapeutic Reference* (entry 364), and *Veterinary Pharmaceuticals and Biologicals* (entry 365). A work for dentists is *Accepted Dental Therapeutics* (entry 249).

There are many titles available now for consumers, in fact quite a proliferation of them. Some cover prescription drugs mainly, but there are many that list only over-the-counter (OTC) drugs. Examples of those covering prescription drugs include Long's *The Essential Guide to Prescription Drugs* (entry 308), Gossel's *Prescription Drugs* (entry 283), and the American Society of Hospital Pharmacists' *Consumer Drug Digest* (entry 254). Another such publication is *About Your Medicines*, an abridged edition of the *USP DI: Vol. II, Advice for the Patient* (entry 358).

Although health care professionals do not encourage self-medication, it has become important in the American health care delivery system. In recognition of this and the fact that the consumer may need assistance, the U.S. Food and Drug Administration has sponsored an "OTC Review," an exhaustive evaluation of the ingredients and labeling found in over-the-counter medicines available to American consumers. Publications listing OTC drugs include the following: Benowicz's *Non-Prescription Drugs and Their Side Effects* (entry 257), Gossel's *Nonprescription Drugs* (entry 282), *Handbook of Nonprescription Drugs* (entry 289), Harkness's *OTC Handbook: What to Recommend and Why* (entry 290), Li Wan Po's *Non-Prescription Drugs* (entry 305), *Physicians' Desk Reference for Nonprescription Drugs* (entry 336), Rubinstein's *A Doctor's Guide to Nonprescription Drugs* (entry 344), *Widger's Guide to Over-the-Counter Drugs* (entry 366), and Zimmerman's *The Essential Guide to Nonprescription Drugs* (entry 368).

Since pharmacists have undertaken the role of providing drug information to patients as well as to the medical community, several books have been published to assist them in that endeavor. These include *Medication Teaching Manual: A Guide for Patient Counseling* (entry 312), Smith's *Medication Guide for Patient Counseling* (entry 349), and *USP DI: Vol. II, Advice for the Patient* (entry 358). There are also publications that are intended for use by physicians in advising patients such as Griffith's *Instructions for Patients* (entry 287).

There are several titles listed in this section that cover special classes of drugs exclusively such as Bassuk's *The Practitioner's Guide to Psychoactive Drugs* (entry 256), Carl's *Guidelines for Parenteral Medication Usage* (entry 265), Honigfeld's *Psychiatric Drugs* (entry 292), and *New Drugs Annual: Cardiovascular Drugs* (entry 321). Also available are books that deal with special patient groups such as Berkowitz's *Handbook for Prescribing Medications During Pregnancy* (entry 258), Conrad's *Drug Therapy for the Elderly* (entry 270), and Shirkey's *Pediatric Therapy* (entry 345).

There are price books available, the best examples being *Drug Topics Red Book* (entry 274), and *American Druggist Blue Book* (entry 252). In addition, Kastrup's *Facts and Comparisons* (entry 302) provides a cost index figure to show relative prices of similar products.

One is sometimes called on to answer a question about an investigational drug, such as its status or release date. This information may be difficult or impossible to obtain, but there are several publications that may assist. These are *Drugs in Prospect* (entry 276), *Drugs in Research* (entry 277), *Drugs in Use* (entry 278), *NCI Investigational Drugs* (entry 318), *PharmIndex* (entry 334), and *Unlisted Drugs* (entry

362). The latter is an excellent source of information about all drugs not readily found elsewhere. The periodical *Inpharma* (entry 824), listed in Section III-1, is also useful for this purpose.

Information is often sought regarding foreign drugs, those not available in the United States, or available under another name. This section includes works from a number of foreign countries that list their drugs. Examples are *Diccionario de Especialidades Farmaceuticas, Mexicana* (entry 273), *Indian Pharmaceutical Guide* (entry 295), *L'Informatore Farmaceutico: Annuario Italiano dei Medicamenti e dei Laboratori* (entry 296), *Rote Liste* (entry 343), *The Pharmaceutical Codex* (entry 333), and *JAPTA List: Japanese Drug Directory* (entry 300).

There are also several titles that are international in coverage. These include *Index Nominum 1984* (entry 294), *Repertorio Terapeutico, Medicamento* (entry 340), *Unlisted Drugs* (entry 362), Negwer's *Organic-Chemical Drugs and Their Synonyms* (entry 320), Marler's *Pharmacological and Chemical Synonyms* (entry 310), and *Martindale: The Extra Pharmacopoeia* (entry 105, described in part 1, chapter 5).

There is one title in this section that lists "orphan drugs," Anderson's *Orphan Drugs* (entry 255). Orphan drugs are medicines that no U.S. pharmaceutical company produces. Several titles in part 2, chapter 14 discuss these drugs further.

Drug side effects are frequently mentioned in works in this section, but for the most part titles dealing with them are listed in the following section.

The Iowa Drug Information Service's *Drug Literature Microfilm File* (entry 298) is a comprehensive file covering many aspects of drug information. Another unique publication is the *D-List*, a listing of drugs that have been withdrawn from the market (entry 271).

It is noteworthy that some other publications listed in other sections of this bibliography are also of value for the drugs they list. Important ones include *Merck Index*, (entry 154, described in part 1, chapter 8) and *Remington's Pharmaceutical Sciences* (entry 107, described in part 1, chapter 5).

247. AMA Drug Evaluations. 5th ed. Prepared by the AMA Division of Drugs in cooperation with the American Society for Clinical Pharmacology and Therapeutics. Chicago, IL: American Medical Association, 1983. 1884p. bibliog. index. \$64.00. LC 76-9254. ISBN 0-7216-1107-9.

First published in 1971, the consecutive editions of this work have been continually updated to keep pace with the rapid proliferation of new drugs. The contributors to the compendium include the professional staff of the American Medical Association Division of Drugs in consultation with many other distinguished professionals. An attempt is made to present enough essential information about drugs to allow the practicing physician to make a judgment regarding the use of a drug by his patient.

The introductory chapters of the book deal with such matters as prescription writing, drug interactions, adverse reactions, drug response, and dosage. The arrangement of the main part of the work is by therapeutic category. Most chapters contain an introduction that provides a general discussion of the uses of the drugs in the category under consideration. Comparative evaluations are frequently given, as well as the usual individual evaluations. The individual drug monographs usually include the following information: names (generic, trade, and chemical); chemical formula; discussion; route of administration; usual dosage; and preparations available. The extensive index to the volume is printed on colored paper and placed in the middle of

the volume. In it drugs are listed by trade as well as generic names along with diseases and symptoms.

The work is of high quality and much used. The claim is made that it covers over 90 percent of drugs prescribed. The AMA Division of Drugs is developing an online drug database for more rapid update and convenient access to drug information.

248. **APhA Drug Names: An Index that Correlates Drug Names by Brand and Nonproprietary Terms.** 2nd ed. Washington, DC: American Pharmaceutical Association, 1979. 313p. \$18.00pa. LC 78-78275. ISBN 0-917330-24-2.

Intended for use by all health care professionals, especially pharmacists, this work provides compact information on drug names. It is important to be able to determine and correlate drug nomenclature because of the availability of new drugs, marketing of established drugs by a number of different manufacturers or distributors, coverage for reimbursement purposes by insurance and welfare programs, alterations in both prescribing and dispensing practices, and a growing awareness and concern about adverse drug reactions.

The book contains introductory material on various aspects of drug nomenclature and instructions on how to use the work. The main part of the book is a cross-referenced alphabetical list of brand and nonproprietary names. With each entry the manufacturers of the products are indicated and in addition what combinations the drug in question appears in. The names of the combination products also appear in the alphabetical listing.

A directory of manufacturers with addresses is appended. This book is one of the few that lists manufacturers who market drugs under nonproprietary names. These manufacturers are the small, lesser known ones or little-known divisions of large companies.

249. **Accepted Dental Therapeutics.** 39th ed. Chicago, IL: Council on Dental Therapeutics of the American Dental Association, 1982. 424p. bibliog. index. LC 74-642043. ISBN 0065-079-X.

Originally called *Accepted Dental Remedies* when it was initiated in 1934, this standard reference work began as an annual. Of recent years it has usually appeared biennially. It is designed to assist the dentist in selecting appropriate drugs and procedures for the prevention and treatment of oral diseases.

The material is presented in these general sections: (1) General principles of medication; (2) Therapeutic agents; (3) Preventive agents; and (4) Indexes. The latter section includes an index to selected council reports, an index of distributors, a directory of Poison Control Centers, brand name index, and general index. Sections 2 and 3 each contain general discussions of the products and individual monographs on specific drugs. These monographs usually give synonymous names, a description, actions and indications, adverse reactions and precautions, contraindications, dosage and administration, and accepted preparations.

250. Albanese, Joseph A. **Nurses' Drug Reference.** 2nd ed. New York: McGraw-Hill, 1981. 992p. bibliog. \$25.95; \$18.95pa. ISBN 0-07-000767-5; 0-07-000768-3pa.

Intended for nursing students and practitioners and interested laypersons, the material in this book is presented in list format. It includes about 800 drug monographs alphabetically arranged by generic name, and covers over-the-counter as well as prescription drugs. Combination drugs are included.

The following information is usually given in each monograph: category, brand name preparations available, legal status, description, pharmacologic mechanism, therapeutic uses, dose ranges, dispensing instructions, patient instructions, storage requirements, warnings, precautions, adverse effects, possible interactions, nursing implications, and guidelines for management of overdoses. Several special reference sections are included.

251. **American Drug Index.** Philadelphia, PA: J. B. Lippincott, 1956- . Annual. About \$25.00. LC 55-6286. ISBN 0-397-50703-8 (1985 ed.).

This compact annual publication lists, identifies, gives brief information about, and correlates the many pharmaceuticals available to the medical, pharmaceutical, and allied health professions. This index is needed because drugs and drug products are steadily multiplying, and many similar products exist. The main section (monographs) is arranged alphabetically with numerous cross-references. Drugs are listed by generic name (also called nonproprietary, public, or common name), and chemical name. In addition, synonyms that are in general use are included, many of which are trade names. The inclusion of the variety of names is an outstanding feature of the work. It is also possible to find information on drugs or drug combinations when only one major ingredient is known.

The book is in ten major sections. In addition to the monographs section of about 665 pages, the following parts are included: common abbreviations used in medical orders, approximate practical equivalents, common systems of weight and measure, glossary, title changes for USP and NF monographs, container requirements for USP drugs, container and storage requirements for sterile USP drugs, pharmaceutical company labeler code index, and pharmaceutical manufacturers and/or drug distributors.

The information with each entry includes manufacturer, generic and/or chemical names, composition, strength, pharmaceutical forms available, package size, dosage, and use.

The publication is highly recommended for all who deal with pharmaceuticals. There are many publications that give information about drug products. This one provides compact but essential and intelligible material.

252. **American Druggist Blue Book.** New York: Hearst Corporation, 1928- . Annual. \$18.00.

The *Blue Book* provides prices and miscellaneous other information about prescription drugs, over-the-counter products, cosmetics, toiletries, and other items sold in pharmacy stores.

Several sections are included as follows: (1) Manufacturers' catalog index (a list of major companies with their products named; includes information about the products); (2) Professional product information (lists products by generic name and includes dispensing information); (3) Index of manufacturers (company names and addresses, alphabetically arranged); (4) Product identification guide (a section of color photographs of tablets and capsules); (5) Controlled substances manual for pharmacists (a short section on safeguarding the drugs); (6) Products and prices (the main section); and (7) Index of advertisers.

The main section lists trade name drugs alphabetically. Nontrade name products are listed by generic name. The information provided about each includes the name of the manufacturer, dosage form, package size, direct price, price to the consumer, the *Blue Book* average wholesale price, and manufacturers' codes for the products.

The publication is kept up to date by announcements in the periodical *American Druggist* (see entry 720). A publication similar to the *Blue Book* is the *Drug Topics Red Book* (see entry 274).

253. **American Hospital Formulary Service, Drug Information, 1984.** Bethesda, MD: American Society of Hospital Pharmacists, 1984. 1638p. index. \$40.00pa. (includes supplements). LC 59-7620. ISBN 0-93050-36-5.

For 25 years the forerunner of this publication, *The American Hospital Formulary Service*, was issued in looseleaf form. In 1984 the format, name, and, to some extent, information presented were changed. The new publication is kept up to date by quarterly supplements with a new revised master volume to be issued each January.

The book is a collection of monographs prepared by experts to disseminate comprehensive, unbiased, evaluative drug information to the medical community. It includes virtually all single drug entities available in the United States. A new kind of monograph has been introduced with the new work, summary monographs on recently introduced drugs. The monographs are arranged alphabetically by therapeutic classification, such as antineoplastic agents, cardiovascular drugs, and so on, with further divisions into subclasses. Information provided about each drug usually includes name (generic), other names, structural formula, chemistry and stability, pharmacokinetics, pharmacology, uses, dosage and administration, cautions, toxicity, and preparations available.

This work has been widely used by pharmacists, physicians, nurses, and other health care professionals and by schools of pharmacy, nursing, and medicine.

254. American Society of Hospital Pharmacists. **Consumer Drug Digest.** New York: Facts on File, 1982. 477p. index. \$19.95; \$9.95pa. LC 81-124999. ISBN 0-87196-554-2; 0-87196-686-7pa.

Patients need reference works with detailed information about the drugs they take, information often not supplied by physicians or pharmacists or that may be forgotten. A number of titles for the consumer, in addition to this one, are available, such as Graedon's *The People's Pharmacy* (entry 285), Burack's *The New Handbook of Prescription Drugs* (entry 263), and Mason's *Pharmaceutical Dictionary and Reference for Prescription Drugs* (entry 311).

The book under consideration is perhaps more authoritative than most, readable as well, and contains virtually all the information patients will need. Unlike some of the other books, prices of drugs are not considered, and the work has no "exposé" features. More than 200 prescription and nonprescription drugs are included. Those selected make up over 80 percent of drugs currently prescribed.

The introduction provides a general discussion of how drugs act, dosage forms available, toxicity, the prescription, and expenditures for drugs. The remainder of the book is made up of monographs of about two pages in length on each drug, grouped according to the illnesses each is to treat. Each section begins with a brief discussion of the medicines to be presented. Entries on each drug include pronunciation (a useful feature), brand names, description and actions, possible side effects and what to do about them, precautions that certain patients must be aware of, dosage and how to take the drug, and how to store the product. Included also is practical advice about foods and activities permitted during medication, and what to do if a dose is missed.

The monographs are listed alphabetically in each section by generic name. Trade names are included in the index, however, and an appendix lists Canadian brand names. There is also a short glossary.

This is an excellent work that should prove valuable to almost any drug consumer as well as libraries.

255. Anderson, Kenneth. **Orphan Drugs: Your Complete Guide to Effective, Tested Medications Outside the U.S. and Their Availability.** Foreword by Stephen L. DeFelice. New York: Linden Press, a Stonesong Press Book, 1983. 284p. bibliog. index. \$7.95pa. LC 83-16216. ISBN 0-671-47172-4; 0-671-49521-6pa.

Orphan drugs, so called because no U.S. pharmaceutical company has "adopted" them, are available in foreign countries but are not manufactured in the United States. Mainly because U.S. government regulations are so restrictive, these drugs have not been approved for use in this country. The U.S. Food and Drug Administration requires exhaustive and expensive animal and clinical testing before approval is given. In addition, orphan drugs may be valuable only for treating rare or obscure diseases and unprofitable to test and sell. Also, a product may not be readily patentable because of prevailing patent regulations. The orphan drug problem has caught the attention of the federal government, and changes are being considered.

Meanwhile, the purpose of the work is to inform the reader about many valuable drugs that are available overseas. The book is divided into these sections: (1) Introduction (gives the background on orphan drugs); (2) How to use the sources in this book; (3) Orphan drug directory; (4) Bibliography; (5) Index of drug names; and (6) Index of drug uses. The directory section, which makes up most of the bulk of the book, lists the drugs alphabetically by generic name. About each is given trade names, actions and uses, precautions, dosage and administration, and sources (names and addresses of laboratories/manufacturers that can provide the drug).

Health professionals and researchers may want to use this book to locate drugs for investigatory use or to identify products patients may have taken or obtained in foreign countries. Practicing physicians may obtain authorization from the Food and Drug Administration to treat patients with orphan drugs on an investigational basis.

256. Bassuk, Ellen L., Stephen C. Schoonover, and Alan J. Gelenberg, eds. **The Practitioner's Guide to Psychoactive Drugs.** 2nd ed. New York: Plenum, 1983. 421p. bibliog. index. (Topics in General Psychiatry). \$27.50pa. LC 82-22468. ISBN 0-306-41093-1.

Intended for all who prescribe, dispense, or administer psychoactive drugs, this is a comprehensive handbook organized by clinical syndromes. The book focuses on these matters: the degree to which various psychiatric presentations are drug responsive; describing the assets and limitations of available drug regimens; the relationship of drug treatment to nonbiologic therapies; a pragmatic approach for assessment and management of patients with medication-responsive syndromes; and providing a framework for understanding pharmacotherapy.

These are the chapter headings: (1) Introduction: the practice of pharmacotherapy; (2) Depression; (3) Bipolar affective disorder and recurrent unipolar depression; (4) Psychoses; (5) Anxiety; (6) Insomnia; (7) Substance abuse; (8) Geriatric psychopharmacology; (9) Pediatric psychopharmacology; (10) The use of psychotropic drugs during pregnancy and nursing; (11) Temporal lobe epilepsy; and (12) Legal issues in prescribing psychoactive medications. The format of each chapter is similar. There is a discussion of medicable syndromes and general therapeutic measures. Next there is a presentation of the drugs with the following information provided: chemistry and kinetics, mechanisms of action, clinical effects, adverse reactions, preparations, and clinical applications.

257. Benowicz, Robert J. **Non-prescription Drugs and Their Side Effects**. 2nd ed., rev. New York: G/D Perigee Books (Putnam Publishing Group), 1983. 349p. index. \$6.95pa. LC 83-11396. ISBN 0-399-50855-4.

Benowicz, a biochemist, attempts to help the consumer make appropriate use of over-the-counter drugs and understand their potential for misuse. More than 700 frequently used medications are described, making use of reports by government agencies, pharmaceutical associations, and manufacturers.

The following chapters are presented: (1) Pain, fever, and inflammation; (2) Colds, coughs, allergies, asthma, and sinusitis; (3) Insomnia, tension, and fatigue; (4) The digestive system; (5) Behavior modification; (6) The skin; and (7) Other disorders. In addition, these appended sections are included: (1) Medically active ingredient catalogue; (2) How to stock your family medicine chest; and (3) Guide to potentially hazardous combinations of prescription and nonprescription drugs.

Each chapter is subdivided into three sections. The first, "General Considerations," outlines the cause and effect of the disorder, its suitability for self-treatment, serious diseases that may mimic the symptoms, nondrug treatment, and types of active ingredients often included in over-the-counter products. Section 2, "Self-Treatment," lists conditions for which self-treatment may be suitable, tells when it is not, provides questions to discuss with a health professional before choosing a product, and lists what active ingredients are found in various brand-name products. Section 3, "Product Charts," lists widely available products, including such information as manufacturer, dosage form, active ingredients, and their concentrations.

The book has been found valuable for its intended purpose and can be recommended to consumers, although a number of similar books are available.

258. Berkowitz, Richard L., Donald R. Coustan, and Tara K. Mochizuki, eds. **Handbook for Prescribing Medications During Pregnancy**. Boston, MA: Little, Brown, 1981. 257p. bibliog. index. \$12.95pa. LC 80-83310. ISBN 0-316-09173-1.

The purpose of this brief handbook is to provide clinicians with a quick reference source on the use of drugs during pregnancy. The material is arranged alphabetically by the generic name of the drugs. Information given in each drug monograph includes trade names, indications and recommendations, special considerations in pregnancy, dosage, adverse effects, mechanism of action, and some recommended readings. Appended is a section on vitamins and minerals. There are indices by drug classification and by generic and trade names.

Although the work gives more information on the subject than is found in most drug compendia and is convenient to use; it has been criticized for not being more complete in the number of drugs listed and in information provided.

259. Bressler, Rubin, Morton D. Bogdonoff, and Genell J. Subak-Sharpe, eds. **The Physicians' Drug Manual: Prescription and Nonprescription Drugs**. Garden City, NY: Doubleday, 1981. 1213p. illus. (col.). bibliog. index. (A Biomedical Information Corporation Book). \$17.95; \$19.95 (thumb-indexed). LC 80-2846. ISBN 0-385-17477-2.

In spite of the title, this work is intended for the patient rather than the physician. Because patients are assuming an increasingly greater role in their own health care and because many new drugs are being introduced, the manual fills a need. It presents drug information that physicians use in daily practice and, in addition, material written to help the layperson understand technical information. Included is a warning that the book is intended to reinforce information provided by the physician or pharmacist, not take the place of it.

The book consists of 17 chapters, most on a type of disease or disorder, such as cardiovascular diseases or skin diseases, with suitable drug information provided. Other chapters cover miscellaneous and recently introduced drugs and how to achieve good health. The main chapters provide general discussions followed by individual monographs on suitable drugs. Each drug monograph usually provides generic and trade names, ingredients, manufacturers, dosage form, drug interactions, administration, contraindications, warnings/precautions, and signs of overdose. The vocabulary used in the monographs is often technical and probably unfamiliar to most laypersons. However, a glossary is included. Other appended materials are a drug identification section with color photographs of 1000 tablets and capsules, a selected bibliography, and a directory of major pharmaceutical manufacturers.

The material the book provides is authentic and useful, although there are several other good books available containing similar information for patients, such as *Medication Guide for Patient Counseling* by Dorothy L. Smith and *Consumer Drug Digest* by the American Society of Hospital Pharmacists (see entries 349 and 254). With the exception of the pages that illustrate tablets and capsules, the book is printed on poor quality newsprint paper.

260. **British National Formulary.** London, England: The British Medical Association and The Pharmaceutical Society of Great Britain, 1949-. Semiannual. About \$12.00 each, pa. ISSN 0260-535-X

The title of this publication has varied; from 1949 to 1955 it was called the *National Formulary*. It was changed significantly in content with the 1981 edition when its scope was increased. It has still remained a pocket-sized publication, however, and the plan is still to issue a new edition every six months. The book contains brief information on the prescribable drugs available in the United Kingdom, with notes on them, including doses, side effects, and relative cost.

Introductory material includes sections on guidance in prescribing and emergency treatment of poisoning. The main section, "Classified Notes on Drugs and Preparation," presents brief monographs on individual drugs organized around the body systems or type of disease. Appendices include sections on drug interactions, intravenous additives, and borderline substances (foods and toilet preparations). There is also a short formulary section for convenience in dispensing formulated preparations that are prepared extemporaneously, and a list of manufacturers.

The aim of the book is to assist the prescriber in choosing an appropriate treatment regimen for the patient.

261. Brooks, Stewart M. **Nurses' Drug Reference.** Boston, MA: Little, Brown, 1978. 624p. bibliog. \$22.50. LC 77-6563. ISBN 0-315-10973-8.

This work is a nice compilation of useful information about drugs, but it is certainly not unique because there are many titles that contain monographs on drugs. There are books intended primarily for physicians, others for pharmacists, some for consumers, and some for nurses. This publication, which is tailored to suit the needs of nurses, is divided into three sections. The first, "Classification of Drugs," lists generic and trade names of products under headings indicating uses such as anesthetics, antibiotics, and so on. The second section, the bulk of the work, "Standard and Commonly Used Drugs," contains short monographs on each product, arranged alphabetically, indicating action and use, dosage and administration, cautions, adverse reactions, composition and supply, and legal status. Cross references from synonymous drug names have been supplied. The third section contains well-selected information

that appears to be accurate, although brief and concise. Included are such materials as notes on drug administration, a section on poisoning, the Federal Controlled Substances Act of 1970, pediatric drug dosage, names assigned to radioactive pharmaceuticals, and a glossary of pharmacologic terms.

262. Brown, Warren J. **Patient's Guide to Medicine: From the Drugstore Through the Hospital.** Largo, FL: Aero-Medical Consultants, 1981. 259p. illus. index. LC 72-112417. ISBN 0-912522-71-2.

Written for the layperson by a physician, this book attempts to bridge the communication gap existing between the average patient and the physician. The first chapters take up common problems of health and hygiene, including mental health. Later follow rather extensive sections on pharmaceuticals, including both common over-the-counter and prescription drugs. There are short chapters on choosing a doctor, medical terminology, common diagnostic tests, and the hospital. The book is illustrated with a large number of line drawings, diagrams, and charts. Also, a number of useful tables are included giving information on such things as immunizations, desirable weights, and calorie counting. Although it is concise, good text material is provided.

The book is well done and written at the proper level for the layperson. It also has reference value because it will answer many questions asked by the layperson. Although there is an index, it may be difficult to locate the answers to specific questions because the book's arrangement is rather odd, for instance, "Help from the Drugstore" is Chapter IV, but "Prescription Drugs" are not discussed until Chapter VII.

263. Burack, Richard, and Fred J. Fox. **The New Handbook of Prescription Drugs.** Rev. ed. New York: Ballantine Books, 1975. 440p. index. \$3.95pa. LC 67-13318. ISBN 345-24314-2-195.

The author of this book is a physician who says he wrote the first edition of it (in 1966) to alert doctors and patients to "the present chaotic state of medical therapeutics." He claims his handbook helped catalyze some constructive action, such as the prescribing of more single entity generic products instead of combination drugs manufactured by major drug companies, which are more expensive.

The material of the revised edition is presented in these parts: (1) Preface: Why a revision?; (2) The struggle for rational prescribing; (3) Basic drug list; (4) Prescription drug list; (5) Price list; (6) Prescribing for children; and (7) The top 200 drugs.

The basic drug list contains relatively few drugs presented under therapeutic categories. Only generic names are given. There is no information about the drugs in that section; they are considered in the prescription drug list which is the main section of the book and where comments are found. Information such as use, efficacy, safety, cost, manufacturer, synonymous and trade names, and comparisons with other drugs is provided. The price list, of course, became obsolete very rapidly, although the comparisons may have remained valid.

264. **Canadian Drug Identification Code.** 11th ed. Vanier, Ontario, Canada: Drug Information Division, Bureau of Nonprescription Drugs, Drug Directorate, Health Protection Branch, Health and Welfare Canada, 1984. About 940p. About \$18.00pa. ISBN 0-660-52825-8.

Of recent years this publication has been revised annually. The current one, which is computer generated, presents basic information on about 15,600 drug products that were offered for sale in Canada as of June, 1984. Products for human and veterinary

use are included. Most of such products bear Drug Identification Numbers (DINs) on their labels, and proprietary medicines bear GP numbers.

The volume consists of five sections and six appendices. The sections are as follows: (1) List of products by trade name; (1A) List of GP products by trade name; (2) List of products by DIN or GP number; (3) List of products by manufacturer; and (4) List of products and their composition by Active Ingredient Group Number. The appendices are: (A) List of dosage forms; (B) List of routes of administration; (C) List of measuring units; (D) List of names and addresses of manufacturers; (E) List of medicinal ingredients; and (F) List of animal species.

All of the text material is provided in both English and French.

265. Carl, Gary S., ed. **Guidelines for Parenteral Medication Usage: A Compendium of Dosage and Clinical Information**. Philadelphia and Ardmore, PA: Dorrance and Co., 1978. 232p. bibliog. index. \$12.50. ISBN 0-8059-2534-1.

Designed for nurses, pharmacists, and, to some extent, physicians, this book attempts to provide the reader with complete information on the parenteral medications listed.

The products are listed alphabetically by generic name (trade names are listed in the index). The following information is usually included in each entry: restrictions, drug category, synonyms, how supplied, intravenous dosage, intramuscular dosage, subcutaneous dosage, pediatric dosage, clinical notes, and a list of substances that should not be mixed with the drug under consideration.

266. Clayton, Bruce D. **Mosby's Handbook of Pharmacology in Nursing**. 3rd ed. St. Louis, MO: C. V. Mosby, 1984. 696p. bibliog. index. LC 83-13304. ISBN 0-8016-4243-4.

This is a revised edition of *Handbook of Practical Pharmacology* by Sheila A. Ryan and Bruce D. Clayton. More than 400 single-entity drugs and over 90 combination products are discussed in the book, categorized in chapters according to their primary pharmacologic activity. Most of the chapters include an introductory section that briefly discusses conditions for which the drugs are used, how treatment should be approached, and what measures should be employed to provide patient comfort and improve the effectiveness of the agent. Next the drug monographs are presented alphabetically by generic name within each chapter. Information provided in each monograph includes generic name and trade names, *American Hospital Formulary Service* number, drug category, action and use, characteristics, administration and dosage, drug interactions, and nurse and patient considerations. There are a number of useful appendices, and many tables of drug data are provided throughout.

267. **Combination Drugs Index**. Englewood, CO: Paul de Haen International, 1984. 1 volume covering 1954-1983. \$45.00.

All combination drug products that were introduced in the United States in 1954-1983 are indexed in this publication. Nearly 3500 products are included with trade name, manufacturer, therapeutic class, and year first marketed. There are two sections. The first section is an alphabetical list of proprietary name; the second section alphabetically lists companies with products listed chronologically by the year first marketed.

268. **Compendium of Pharmaceuticals and Specialties.** Ottawa, Canada: Canadian Pharmaceutical Association; distr., New York: Marcel Dekker, 1960-. Annual. About \$79.50. ISSN 0069-7966.

A Canadian publication similar to the *Physicians' Desk Reference* (entry 335) of the United States, this compendium provides monographs on drugs and preparations available for use in Canada to meet the needs of professional practice. Drugs for self-medication are not included. It includes entries on brand name and generic name products, arranged alphabetically (in contrast to the PDR's more complicated arrangement). The monographs are based on information received from the manufacturer and the Health Protection Branch.

A typical entry includes trade name, manufacturer, generic name, and therapeutic category, followed by a drug monograph containing such information as pharmacology, indications, contraindications, warnings, precautions, adverse effects, overdose symptoms and treatment, dosage, and how the drug is supplied. A good deal of miscellaneous information is also provided in supplementary sections. Some of these are monographs of medical devices; monographs of numbered specialties; discontinued products; alcohol, caloric, and sodium content of drugs; how to obtain emergency drugs; vitamin information; a product recognition section (color illustrations of tablets and capsules); and several indexes.

This is a valuable publication, useful in the United States as well as in Canada. A French edition is available also.

269. **Conn's Current Therapy: Latest Approved Methods of Treatment for the Practicing Physician.** 1984 edition edited by Robert E. Rakel. Philadelphia, PA: W. B. Saunders, 1984. 982p. index. \$45.00. LC 49-8328. ISBN 0-7216-2712-9.

Revised annually, this well-known work presents concise, practical, state-of-the-art information on the treatment of major diseases. The publication was initiated in 1949 by the late Dr. Howard F. Conn. A large number of authorities have contributed to the many editions. The book is intended for practicing physicians, but because most of the suggested treatments involve the use of drugs, it is of value also to individuals in the pharmaceutical sciences.

The material is presented in 17 sections: (1) The infectious diseases; (2) The respiratory system; (3) The cardiovascular system; (4) The blood and spleen; (5) The digestive system; (6) Metabolic disorders; (7) The endocrine system; (8) The urogenital tract; (9) The venereal diseases; (10) Diseases of allergy; (11) Diseases of the skin; (12) The nervous system; (13) The locomotor system; (14) Obstetrics and gynecology; (15) Psychiatry; (16) Physical and chemical injuries; and (17) Appendices and index. There are a number of short chapters in each section, usually one for each specific disease.

The work has been criticized because it is very general and does not present enough detail for an experienced practitioner. Specific drug information is lacking also, and there are virtually no literature references. It is generally conceded, however, that it is a good work for general practitioners, as is evidenced by the fact that it has gone through more than 35 editions.

270. Conrad, Kenneth A., and Rubin Bressler, eds. **Drug Therapy for the Elderly.** St. Louis, MO: C. V. Mosby, 1982. 371p. bibliog. index. \$23.95pa. LC 81-38398. ISBN 0-8016-0782-5.

An increasing proportion of the population of the world is made up of the elderly. They often require multiple medications and react differently to drugs than younger individuals. Therefore, they are exposed to risks that may be greater than the benefits

expected. This book attempts to elucidate the influences of age and disease on drug absorption, distribution, elimination, and drug effects.

There are three sections included: (1) Basic concepts in drug disposition; (2) Effects of aging on pharmacotherapeutics; and (3) Therapeutic approaches to disease in elderly patients. Section two includes chapters on drug disposition, adverse reactions, and compliance with drug therapy. Section three includes these chapters: (1) Nutritional therapy; (2) Therapy for cardiovascular disorders; (3) Therapy for hypertension; (4) Anticoagulant drugs; (5) Therapy for gastrointestinal disease; (6) Therapy for respiratory dysfunction; (7) Analgesic and anti-inflammatory agents; (8) Narcotic drugs: special considerations; (9) Antianxiety agents and hypnotics; (10) Neuroleptic agents; (11) Antidepressant agents; (12) Therapy for Parkinson's disease; (13) Anticonvulsant therapy; and (14) Hormonal and endocrinologic agents.

271. **D-List (Discontinued Drug Products)**. St. Louis, MO: Facts and Comparisons, Inc., a division of J. B. Lippincott, 1979- . Annual. ISSN 0196-4143.

Originally called *Discontinued Drug Products*, this annual list has been valuable in that it provides information on drug products that have been withdrawn from the market. Medical practitioners occasionally need to know whether a certain product is still available. The source of the information is *Facts and Comparisons* (see entry 302) from which discontinued products are deleted when pages are revised.

The publication lists the drugs alphabetically by trade name giving distributor, distribution status, dosage form, ingredients, and strengths. Generic names are listed when all brands of a particular drug have been discontinued. A five-year cumulation appeared in 1981.

272. **Deutscher Arzneimittel-Codex, 1979: (Ergänzungsbuch zum Arzneibuch)**. Hrsg. von der Arzzeitgemeinschaft der Berufsvertretungen Deutscher Apotheker; bearb. von der Kommission Deutscher Arzneimittel-Codex. Frankfurt am Main, Germany: Govi-Verlag Stuttgart, Germany: Deutscher Apotheker-Verlag, 1979- . 2 vols. looseleaf. index.

This pharmacopeia begins with information on testing methods; then drug monographs are presented alphabetically. The monographs include synonymous names, chemical formulas, structural diagrams (sometimes), content, preparation methods, quality, assay, tests, storage information, and similar information indigenous to compilations of this kind.

There is a supplementary section, "Neues Rezeptur-Formularium" which lists drugs by category.

273. **Diccionario de Especialidades Farmaceuticas, Mexicana**. Mexico: Ediciones P. L. M.; distr. Drug Intelligence Publications (1241 Broadway, Hamilton, IL 62341), 1944- . Irregular. \$52.00. ISBN 986-460-056-9 (for 30th ed., 1984).

This publication is available in other editions for use in other Latin American countries such as Colombia, Ecuador, Peru, and Centro-America.

The material is presented in several parts, as follows: (1) Index of drugs by therapeutic classification; (2) Alphabetical list of products; (3) Directory of manufacturers of Mexico with their products listed; (4) General index of products; (5) Index that gives names of makers and providers of products, equipment, and services; and (6) Index by type of product. Illustrated advertisements for products are included.

The publication is similar to the U.S. *Physicians' Desk Reference* (see entry 335), except that it is for Mexican and Central and South American drugs.

274. **Drug Topics Red Book.** Oradell, NJ: Medical Economics, 1941- . Annual. \$21.00 per year.

This reference guide and price book, prepared chiefly for retail and hospital pharmacists, contains more than 170,000 listings alphabetically arranged. Between editions it is kept up to date with supplements. The product information section lists all pharmaceuticals, ethicals, and sundries sold in drug stores with currently available prices (suggested price to pharmacists and to consumers), sizes, and forms. Other sections include product identification section, which provides full-color product reproductions designed to make identification easier; manufacturers' catalogs, an alphabetically arranged reference source of product information; and a list of manufacturers whose products are included with address and phone number.

The publication is similar to the *American Druggist Blue Book* (see entry 252).

275. **Drugs in Current Use and New Drugs.** Edited by Walter Modell. New York: Springer Publishing, 1955- . Annual. \$11.95.

The editor of this compact annual publication is a well-known pharmacologist who has compiled the work through many editions. The main part of the presentation is an alphabetical listing of basic drugs currently used. Included are well-established drugs, new ones on trial, old ones of questionable value but still used, drugs seen primarily in poisoning cases, and some that have been withdrawn from the market but are still encountered in the literature. The purpose of the list is to provide useful concise information. Usually included about each substance are the following: proprietary names and synonyms, physical properties, actions and uses, warnings, modes of administration, and preparations available. The listing is by nonproprietary name, but cross-references under trade names have been provided. To keep the book to a small size, relatively few drugs are listed, and those are usually only single chemical entities.

Part II of the book lists a few drugs that have been introduced on the market within the past year. Somewhat more extensive descriptions are provided for them than for those in Part I.

The work is especially suitable and useful for nurses.

276. **Drugs in Prospect.** Englewood, CO: Paul de Haen International, 1977- . Monthly card service and/or bimonthly microfiche. \$1095.00 per year. 1980-1985 available on magnetic tape; other back issues on microfiche.

This card service provides reports on newly synthesized compounds that exhibit pharmacologic activity. More than 2000 substances are included annually. There are five indexes: therapeutic use, chemical name, molecular formula, nonproprietary name, and source or manufacturer.

Each report usually includes use, therapeutic classification, chemical name, molecular formula, nonproprietary name, synonyms, structural diagram, source, activity, test system, dose, results, and a literature reference.

277. **Drugs in Research.** Englewood, CO: Paul de Haen International, 1977- . Monthly card service and/or bimonthly microfiche. \$795.00 per year. 1980-1985 available on magnetic tape; other back issues on microfiche.

The service provides reports of investigational drugs involved in preclinical and clinical studies. More than 10,000 reports are provided annually. There are five indexes: therapeutic use, trademark, nonproprietary name, disease, and source or manufacturer.

Each report includes the following for clinical studies: general information such as type of study, classification of drug, trade name and synonym, manufacturer, country, and drug status; patient data such as total in the study, sex of patients, dose, route, and duration; design (purpose and type); comparisons; literature references; and an abstract. For each preclinical report the following is given: general information, design of the study, combinations, comparisons, literature references, and an abstract.

278. **Drugs in Use.** Englewood, CO: Paul de Haen International, 1964-. Quarterly microfiche service. \$1095.00 per year. Back issues available on microfiche and/or magnetic tape.

This service provides reports on both marketed and investigational drugs involved in clinical studies. Over 8000 reports are made annually. There are five indexes: therapeutic use, trademark, nonproprietary name, disease, and source or manufacturer.

The following information is provided in each report: general information such as type of study, classification of the drug, trade name/synonyms, manufacturer, country, and drug status; patient data such as total number in study, sex of the patient, age, race, dose, route, and duration; design of study; adverse reactions; comparisons; results; conclusion; and literature references.

279. Fisher, Richard B., and George A. Christie. **A Dictionary of Drugs: The Medicines You Use.** Updated and rev. ed. New York: Schocken Books, 1972. 256p. index. \$7.95. LC 76-12241. ISBN 0-8052-3638-4.

Described here in detail are 56 drugs, therapeutically useful chemicals. The use and operating mechanisms are described as well as effects, chemical makeup, and side effects. In addition to the 56 entries, some 300 chemically related agents are named, enlarging the scope of the work. Also some general classes of drugs are discussed. There are three indexes, one by trade name, one by common chemical name, and the third by diseases treated.

The dictionary is intended for the layperson, but it is not a guide to self-dosage, nor does it stress price. The main concern is to let the reader know what a drug does and why. A detailed list of side effects is given, even if they rarely occur, because so much concern has been given to them. The text is rather technically written, but the book should prove useful to most audiences anyway, including the layperson, because it is both authentic and informative.

280. Ford, Diane C., Edward R. Leist, John T. Algren, Mary S. Phillips, and Carla L. Sanders. **Guidelines for the Administration of Intravenous Medications to Pediatric Patients.** Bethesda, MD: American Society of Hospital Pharmacists, 1982. 17p. bibliog. \$7.00pa.

Intended for physicians, nurses, and pharmacists, this publication provides guidelines to be used in giving intravenous medications to hospitalized pediatric patients (17 years old and under). The presentation is in the form of one long table that provides this information: generic and brand names of drug, initial dilution, maximum dose, rate of administration, administered by whom (e.g., RN, LPN), cautions and comments, and literature references.

281. Gahart, Betty L. **Intravenous Medications: A Handbook for Nurses and Other Allied Health Personnel**. 3rd ed. St. Louis, MO: C. V. Mosby, 1981. 258p. bibliog. index. \$16.95pa. LC 81-4027. ISBN 0-8016-1719-7.

Intravenous drugs are instantly absorbed into the bloodstream, leading to prompt therapeutic action, but the risk of an inappropriate reaction is a constant threat. Consequently, health professionals who administer such drugs need a reliable reference tool, and this one serves that need very well. The handbook is said to include all drugs presently approved for intravenous use.

The drug monographs are arranged alphabetically by the generic name of the drug. All names are listed in the index. The monographs include the following information: trade names, pH (when available), usual dose, pediatric dose, dilution, rate of administration, actions, indications and uses, precautions, contraindications, incompatibilities, side effects, and antidote.

282. Gossel, Thomas A., Donald W. Stansloski, and the editors of Consumer Guide. **Nonprescription Drugs**. New York: Beekman House, 1980. 250p. index. LC 80-84033. ISBN 0-517-29290-4.

Intended to guide the reader in decisions on health care and the use of over-the-counter drugs, this book examines advertising practices that lead the consumer to choose certain drugs, suggests ways to save money on drugs, tells what to expect from the products, and evaluates popular over-the-counter medications.

There are two short chapters of text as follows: (1) Nonprescription drugs and self-treatment; and (2) Buying, storing, and using drugs. Next a section, "Choosing the OTC Remedy for Your Ailment," discusses groups of drugs arranged alphabetically by therapeutic category. The longest section, "Drug Profiles," lists more than 400 common drugs with the following information provided for each: manufacturer, ingredients, dosage form, use, side effects, warnings, contraindications, and comments.

This is a useful publication that serves the reader well.

283. Gossel, Thomas A., Donald W. Stansloski, and the editors of Consumer Guide. **Prescription Drugs**. New York: Beekman House, 1981. 252p. index. LC 81-1956. ISBN 0-517-26294-0.

Both Gossel and Stansloski are registered pharmacists and Ph.D. clinical pharmacologists. Their intent is to provide the consumer with information about how drugs work, when potential dangers may arise, and what side effects to expect from drug use.

The first part of the book presents text material on the following topics: (1) Working with your doctor and pharmacist; (2) Buying and storing drugs; (3) Poisoning—and what to do when it happens; (4) Administering medicine correctly; (5) Saving money with generic drugs; (6) How drugs work; (7) Is the cure worse than the disease?; (8) Common side effects; and (9) What went wrong?

The second part of the book, "Drug Profiles," provides an outline of the characteristics of the most frequently prescribed drugs. Most of the drugs are listed by trade name with cross-references provided under other names. About each drug the following is provided: manufacturer, ingredients, equivalent products, dosage forms, use, minor side effects, major side effects, contraindications, warnings, and comments.

284. Govoni, Laura E., and Janice E. Hayes. **Drugs and Nursing Implications**. 4th ed. Norwalk, CT: Appleton-Century-Crofts, 1982. 1143p. bibliog. index. \$24.50. LC 82-11158. ISBN 0-8385-1786-2.

The scope of nursing functions and responsibilities has expanded of recent years, placing great demands on the nurse to be well informed about current therapies and capable of translating this into safe and effective nursing. Each edition of this compilation has grown in size and coverage, listing more drugs and covering more areas of information.

The drug monographs are arranged alphabetically by generic names. Information provided about each includes trade names, pronunciation, drug class, actions and uses, absorption and fate, contraindications and precautions, adverse reactions, route and dosage, and nursing implications. The latter area is rather comprehensively covered in a section about a page in length.

The index lists drugs four ways: by generic and trade name, pharmacologic action, and classification.

285. Graedon, Joe. **The People's Pharmacy—2.** With Teresa Graedon. New York: Avon Books, 1980. 468p. bibliog. index. \$5.95pa. LC 80-66153. ISBN 0-380-76059-2.

A companion volume to an earlier work, *The People's Pharmacy*, this guide to prescription drugs, home remedies, and over-the-counter medicines is intended to provide the patient with basic information about drugs. Also provided is information that may save the consumer money.

The following chapters are included: (1) To your health; (2) Over-the-counter medications; (3) Drug interactions; (4) Graedon's grab bag of wonderfully wacky weirdness and helpful home remedies; (5) Vita . . . vita . . . vitamins; (6) For women only; (7) Contraceptive update; (8) Drugs and children; (9) Drugs and older people; (10) Arthritis: from A (aspirin) to V (vinegar); (11) Drugs and your head; and (12) Saving money in the pharmacy. Helpful tables have been included with many chapters, for example, "Some Common Prescription Symbols," and "Foods High in Vitamin C."

The author presents his material in a slangy, informal style that many may find inappropriate, but for the most part the subject matter is authentic and the advice reasonable and suitable. Graedon's qualifications for writing the book are fairly good; he is said to have a Master's degree in pharmacology, and he writes a syndicated column on self-care drug information. His two books have sold well.

286. Griffith, H. Winter. **Complete Guide to Prescription and Non-Prescription Drugs.** Tucson, AZ: HP Books, 1983. 888p. index. \$9.95pa. LC 83-82397. ISBN 0-89586-275-1.

There are a number of books available for consumers that provide information about medicines. Some of these stress undesirable effects and costs of drugs; others are more concerned with instructing the patient on how to take the drug, what to do if a problem arises, and providing information that the physician or pharmacist may have failed to make clear. Griffith's book is of the latter type.

The work contains entries for over 400 prescription and nonprescription drugs, comprising over 2500 brand names. The drugs are arranged alphabetically by generic name, but brand names are included in the index. Each entry is about two pages in length, in chart form, and includes the following information: brand name or names; general information and uses; dosage and usage information; overdose instructions; possible adverse reactions or side effects; warnings and precautions; and interactions with other drugs and with substances such as alcohol, tobacco, common drugs of abuse, and foods.

In addition to the main section, there are supplementary materials, including an essay on "Drugs and You," a guide to using the drug charts, a section on drugs of abuse,

a checklist for safer drug use, a list of additional brand names, additional drug interactions, a glossary, and emergency guides for overdose and anaphylaxis victims.

The material in the book is authentic and well presented, and more drugs are listed than is usual in works of this kind.

287. Griffith, H. Winter. **Instructions for Patients**. 3rd ed. Philadelphia, PA: W. B. Saunders, 1982. 395p. \$39.50pa. LC 81-40477. ISBN 0-7216-4286-1.

Intended mainly for physicians, this work consists of a series of about 280 monographs designed to provide patients with basic information on diseases and their treatment. The work is designed so pages may be copied and given to the patient for reference.

A wide range of topics is covered, including chronic diseases and such conditions as acne, infertility, and the common cold. The information is quite practical, but it is brief in the area of drug treatment.

288. Gulick, William. **Rx Consumers' Guide to Prescription Prices: A Money Saving Guide**. Syracuse, NY: Consumer Age Press, 1973. About 300p. \$3.95pa.

This book attempts to teach the patient how to read a doctor's prescription and also indicates the average retail prices of prescription drugs that were current at the time the book was published. The aim of the publication was to make it possible to "shop as wisely for prescription drugs as you do for any other consumer product."

Possibly the guide will be of assistance to the patient, but the concept of treating medicines as any other consumer product may not be a sensible one. The patient is usually best advised to follow his physician's instructions. Also, there are other things to consider in the purchase of drugs than price alone, such as quality of the drug, the pharmacist's professional competence, and the extent of services offered such as the maintenance of patient records. In addition, it is not advisable to use several different drugstores as sources for medicines. One place should have the complete patient record to be able to determine the possibility of the drugs an individual uses interacting adversely.

As for the price schedules included, much more complete and current lists are available (although the public does not always have easy access to them), such as the annual *American Druggist Blue Book* (see entry 252) and *Drug Topics Red Book* (see entry 274). Any price list becomes outdated very rapidly, and frequent updating is necessary to keep a list current. No indication is given that updatings were planned for the publication under review.

It is true that the public should be better informed about medicines, but it is doubtful that many of the suggestions made in this book will be of benefit.

289. **Handbook of Nonprescription Drugs**. 7th ed. Washington, DC: American Pharmaceutical Association, 1982. 682p. illus. (part col.). bibliog. index. \$45.00. LC 82-3994. ISBN 0-917330-40-4.

When the first edition of this excellent publication appeared in 1967, there were virtually no other reference works available that gave information on nonprescription drugs. Although there have been a number since that purport to be guides to home remedies and over-the-counter drugs, particularly for the layperson, there are no others as comprehensive and authoritative as this one. The *Handbook* is not intended for the lay public, but rather to assist pharmacists and other health professionals in providing information and professional advice to the patient. However, much of the material is suitable for the educated layperson and is being used by him.

Information has been included on product formulas, indications/contraindications, safety, and appropriate use of specific nonprescription drugs. Some of the material is presented in tabular form, although text discussions and literature references also have been included. The present edition of the book is about three times the size of the first.

The *Handbook* is made up of 34 chapters, each on a different type of product (e.g., antacids, acne products, etc.). Two new chapters entitled "FDA's OTC Drug Review" and "Patient Assessment and Consultation" have been added to this edition.

The *Handbook* was compiled using a group of authors, an advisory committee, and a review panel, all made up of distinguished members of the pharmaceutical and/or other health science professions. The work is extremely useful and needed. The lay public continues to use large amounts and varieties of self-prescribed medications.

290. Harkness, Richard. **OTC Handbook: What to Recommend and Why.** 2nd ed. Oradell, NJ: Medical Economics, 1983. 204p. \$13.95pa. ISBN 0-87489-303-8.

The author of this book feels that self-medication is an accepted part of the American way of life, but that guidance is needed in selection and use of nonprescription drugs. His book provides factual information about these drugs in an easy-to-use reference style, covering such areas as side effects, drug interactions, contraindications, proper dosage, and ingredient effectiveness. The material is arranged in chapters by type of disease or medical problem, for example, treatment of pain or treatment of indigestion.

The book can be used as a countertop information source for patients to consult.

291. **The Henston Veterinary Vade Mecum** Edited by J. M. Evans, R. Curtis, and Isabel M. Wilkins. London, England: Henston Limited (Available from Veterinary Drug Co., Limited, 129-135 Lawrence St., York, Yol 3EG, England), 1982-. Annual. About £7.50pa.

This "Vade Mecum" was designed primarily to assist veterinary surgeons in their practice by providing them a source of information on veterinary pharmaceuticals. Also provided is information to assist in diagnosis and miscellaneous information regarding the care of dogs and cats.

The work is in several sections as follows: (1) Directory of veterinary pharmaceutical companies (in the United Kingdom); (2) Directory of veterinary wholesalers (in the United Kingdom); (3) Therapeutic index; (4) Therapeutic products—summary tables; (5) Table of constants; (6) Other useful information; (7) Feeding of dogs and cats; (8) Classified directory (information and advertisements relating to finance, insurance, and dog and cat accessories, etc.); (9) Useful addresses and telephone numbers (in the United Kingdom); and (10) New product information.

Obviously, the work is of most value to those in the United Kingdom. The publication was made possible by the assistance of the pharmaceutical industry generally and advertisers who placed ads in the book. The publishers plan to update the material frequently.

292. Honigfeld, Gilbert, and Alfreda Howard. **Psychiatric Drugs: A Desk Reference.** 2nd ed. New York: Academic Press, 1978. 251p. bibliog. index. \$13.50pa. LC 77-77235. ISBN 0-12-354860-8.

The first edition of this manual on the clinical uses of psychiatric drugs was written primarily for psychologists, social workers, occupational therapists, psychiatric nurses, and other mental health workers. Physicians also found it useful as a refresher

publication. The second edition has been updated and enlarged, and particularly new considerations of the problems and indications for drug treatment in the young and the elderly have been added.

The following chapters are included: (1) Introduction; (2) Antipsychotic drugs; (3) Antidepressant drugs; (4) Antimanic or mood-stabilizing drugs; (5) Antianxiety drugs and sedatives; (6) Stimulants; (7) Electroconvulsive treatment; (8) Drug treatment of addictions; (9) Juvenile and geriatric psychopharmacology; (10) Side effects; (11) Handling drug emergencies; (12) Discontinuation, maintenance, and prophylaxis; (13) Diagnosis and somatic therapy; (14) Current developments; and (15) Evaluating your medical colleagues. In addition, there are several appendices that give information on the drugs in tabular form. The book provides a good overview of the current state of clinical psychopharmacology.

The manual fills a need. The mental health field is changing; traditional roles are shifting; and health professionals other than physicians are assuming more responsibility for patients' treatment. There are a number of encyclopedic works that provide a scholarly review of the literature of psychopharmacology, but this manual, a relatively short work, presents practical information in a concise, nontheoretical manner that is more suitable for the allied health professional.

293. Hopkins, S. J. **Principal Drugs: An Alphabetical Guide to Modern Therapeutic Agents**. 7th ed. London, England: Faber and Faber, 1983. 186p. \$4.95pa. ISBN 0-571-18063-9.

This pocket-sized guide to currently used British therapeutic agents is designed for nurses and other health care professionals who require quick and accessible information on drugs. The emphasis is on new drugs.

The presentation is in two main parts. The first part lists the drugs alphabetically in dictionary style with a brief description of their use and an indication of the average adult dose. The other main section is a table of approved and proprietary names, the intent of which is to provide identification of the agents. The drugs are listed first by approved name followed by proprietary name and main action. Then each drug is listed by proprietary name followed by approved name and main action. At the front of the book there are short sections on drug administration and responsibility, drug compliance, weights and measure, and abbreviations used in prescriptions.

The book is well organized and convenient, but it is very limited in size and scope.

294. **Index Nominum 1984**. Edited by H. P. Jaspersen, et al. Compiled by the Laboratory of the Swiss Pharmaceutical Society. Zurich, Switzerland: Swiss Pharmaceutical Society, 1984. 1026p. \$94.00pa. ISBN 3-909800-02-5.

Considered a very valuable tool for identifying internationally available products, this work lists in a single alphabet synonyms for a large number of therapeutic compounds. It is revised every two years, and each revision has been cumulative from 1957. Older discontinued or never-marketed substances have been omitted from the list, however, to make space for new ones. An indication is provided if a drug appears for the first time in this edition.

The main entries are usually under the recommended international nonproprietary name with cross-references provided from other names. The following information is given about each drug: therapeutic category; chemical name; graphic formula; approved generic name; salts, esters, and so on of the main substance; where pharmacopeia monographs may be found; other synonyms and code designations; remarks; manufacturer or distributor with domicile; and brand names.

The introductory text material of the work is given in three languages: French, German, and English.

295. **Indian Pharmaceutical Guide.** New Delhi, India: Pamposh Publications (506, Ashok Bhawan, 93, Nehru Place, New Delhi 110019), 1963-. Annual. About \$60.00 per year.

Anyone seeking information pertaining to pharmacy and the pharmaceutical industry of India will find this guide helpful. It has steadily increased in size (now more than 1600 pages in length), and has evolved as a standard reference work.

There are several sections as follows: (1) Manufacture, laws and literature (text material on the industry and laws; lists of publications and films); (2) Pharmaceutical organisations and institutions directory; (3) Chemists and druggist directory; (4) Allied manufacturers and their products (machinery, packaging materials, drugs and chemicals and surgical instruments); (5) Pharmaceutical manufacturers and their products with compositions, packings, and prices (the largest section); (6) Pharmaceutical manufacturers list; (7) Cosmetic manufacturers list; (8) Drug and chemical index; (9) Indexes to manufacturers and advertisers; and (10) Index to pharmaceutical products.

The information provided in Section 5 is brief, just name, dosage form, how supplied, and wholesale and retail price. The products are arranged alphabetically under the names of the manufacturer. A great many advertisements are scattered throughout the volume.

296. **L'Informatore Farmaceutico: Annuario Italiano dei Medicamenti e dei Laboratori.** Milan, Italy: Organizzazione Editoriale Medico-Farmaceutica, 1940-. Annual.

Now in three volumes, this Italian directory lists drugs and manufacturers and contains other information of interest. Volume 1, the largest part, lists pharmaceutical specialties available in Italy and some preparations not available in that country. Also included is a list of active ingredients and a list of drug trademarks according to a pharmacologic classification code.

The second volume lists parapharmaceutical products such as cosmetics, devices, dietary items, and related products. These products are also listed by type-of-product codes.

The third volume lists mainly manufacturers and distributors and their products such as chemicals, raw materials, intermediates, and bulk drugs. Wholesalers, producers, importers/exporters, and so on are listed with their addresses.

Most of the text is in Italian, but much of the explanatory material is also in English.

297. **International Nonproprietary Names (INN) for Pharmaceutical Substances. Dénominations Communes Internationales (DCI) pour les Substances Pharmaceutiques.** Cumulative List No. 6. Geneva, Switzerland: World Health Organization, 1982. 494p. 55 Swiss francs. ISBN 92-4-056013-0.

Lists of proposed and lists of recommended international nonproprietary names (INN) are published regularly in the *WHO Chronicle*. From time to time cumulative lists of these names have been issued. This volume includes all the INN published up to the end of 1981 and is the first cumulative list to appear since 1977.

The work consists mainly of a computer printout of INN in Latin, English, French, Russian, and Spanish, together with the number of the list of proposed names and the

list of recommended names in which it appears, the "request number," molecular formula, and Chemical Abstracts Service (CAS) registry number. National names are also given. For chemical names and graphic formulas it is necessary to consult the individual lists of INN.

The book includes five appendices as follows: (1) Names for radicals and groups; (2) Alphabetical list of national names; (3) Molecular formula index; (4) CAS registry number index; and (5) Procedure for selection of names.

The text material of the work is given in both English and French.

298. Iowa Drug Information Service (IDIS). **Drug Literature Microfilm File (DLMF)**. Iowa City, IA: Iowa Drug Information Service, a division of the College of Pharmacy, University of Iowa (Westlawn, Box 330, Iowa City, IA 52242), 1966-. Microfiche. Monthly. \$900.00 per year.

In compiling this file, literature references are taken from about 150 journals, mostly with clinical orientation, and the full text is microfilmed and made available to subscribers on microfiche. Indexes are compiled by generic drug names and disease terms, which are also produced on microfiche. The microfilmed articles are to be filed numerically, the index fiche alphabetically.

IDIS makes some special services available from time to time. Subscribers may request computer search of the database; bibliographies for drugs recently approved for marketing by the U.S. Food and Drug Administration are available; and a videocassette was prepared to assist in explaining how to use the DLMF.

The service is unique and useful, particularly because it makes available to the user literature that may not be available in the original.

299. Ippen, Hellmut. **Index Pharmacorum: Synonyma, Struktur and Wirkuns der organisch-chemischen Arzneistoffe**. Geleitwort von Werner Koll. Hrsg. im Auftrag der Deutschen Forschungsgemeinschaft. 2. unveränderte Aufl. Stuttgart, Germany: Thieme, 1974. 693p. bibliog. index.

This large book lists drugs in a classified arrangement. About each the following information is given: a brief description, structural diagram, chemical name, formula, and a long list of synonymous terms including trade names used in a number of countries. Also included are manufacturers' names and an indication if the drug is official in certain countries. There are indexes by use, substance or substance group, and synonymous names.

300. **JAPTA List: Japanese Drug Directory**. Tokyo, Japan: Japan Pharmaceutical Traders' Association, 1968-.

Listed in this directory are the main Japanese pharmaceutical products and also about 200 of the leading drug companies of Japan. The work is in English and is rather comprehensive. The arrangement is alphabetical by the names of the Japanese products, international nonproprietary names, Japanese pharmacopoeia names, and research numbers of various countries. Brief information is given about each drug: composition, other names, including the chemical name, dosage form, use, and how packaged. A pharmacologic index is also included.

301. Jones, Judith K. **Good Housekeeping Family Guide to Medications and Dictionary of Prescription Drugs**. New York: Hearst Books, 1980. 349p. index. \$16.95. LC 80-36867. ISBN 0-87851-041-9.

The author of this work, a physician and pharmacologist, points out there is a growing interest by drug consumers in obtaining full and accurate information about drug effects. The book is based on the premise that a patient who is well informed can obtain better medical care in the traditional medical system. The author has two major goals. The first is to provide general information on drugs, and the second is to present in easily understood fashion detailed information about the most commonly prescribed drugs, particularly their therapeutic actions, possible adverse effects, and interactions.

The work is in three parts. Part I provides basic information about drugs. Part II considers medications for specific disorders. There are about 40 brief sections (or subsections), for example, "Hormonal Drugs." Part III, which makes up more than half the book, is an alphabetical guide to more than 200 of the most frequently prescribed drugs. The drugs are listed either by trade (brand) name or by generic name, whichever is most common, with cross-references from the other form or forms. In addition, each drug is cross-referenced to the chapter in Part II which discusses that class of drugs in general. With each individual drug description are given other names for the drug, the action and uses, dosage, adverse effects, precautions, and drug interactions.

The number of drugs included in this work is limited, but they are well selected. It serves its intended purpose well, and the quality of the material is high. As an added bonus, a good deal of information is included about the diseases treated by the specific drugs discussed.

302. Kastrup, Erwin K., and James R. Boyd, eds. **Facts and Comparisons**. St. Louis, MO: Facts and Comparisons (111 West Port Plaza, Suite 423, St. Louis, MO 63146), 1945-. Looseleaf. \$89.50 (including monthly updates).

When *Facts and Comparisons* first appeared in 1945 as a looseleaf publication, it was barely half the size of the current compendium. The publication has gone through considerable evolution since its inception. It has been continuously kept up to date through monthly supplementary or replacement pages. In 1977 a microfiche edition was also made available. It also provides the monthly updating (current price \$69.50 annually). In 1978 an annual hardbound edition first appeared (current price \$59.50). The latter is not supplemented between editions. The publishers felt it would be suitable for environments where continuing updating is not essential, such as nursing units in hospitals and nursing homes, in libraries, for students, or as a second copy to keep at home.

The work is quite comprehensive, containing information on over 10,000 drug products available in the United States and including more than 3000 over-the-counter products.

Although there are many publications that provide drug information for health professionals, *Facts and Comparisons* has long been one of the standard sources. It is somewhat unique in at least two respects. First, its format provides for easy comparison of the therapeutic aspects of similar products, and second, it provides through a cost index figure an indication of the relative prices of similar or identical products.

The work is organized by therapeutic classes of drugs. In addition to the tables that provide for the comparison of products, monographs are included on each drug. In general, the following information is provided in the monographs: actions, indications, contraindications, warnings and precautions, drug interactions, adverse reactions, overdosage information, patient information, and administration and dosage.

303. Knoben, James E., and Philip O. Anderson, eds. **Handbook of Clinical Drug Data**. 5th ed. Hamilton, IL: Drug Intelligence Publications, 1983. 669p. bibliog. index. \$29.50pa. LC 82-22145. ISBN 0-914768-41-7.

This pocket-sized handbook was developed to meet the need for a concise but comprehensive compilation of clinically useful drug information. The current edition of the work has been considerably expanded and improved over the earlier editions.

The book is divided into two main sections: data compilations and drug reviews. The data compilations chapters are as follows: abbreviations and conversion factors, biopharmaceutics and pharmacokinetics, body measurements, dietary considerations, drug-induced discoloration of feces and urine, drug-induced diseases, drug interactions, drugs and breast-feeding, drugs and pregnancy, geriatric drug use, immunization, laboratory indices, nutritional assessment and parenteral nutrition, pharmacogenetics, and schedules of controlled drugs.

The drug review section makes up about two thirds of the book. Information is given on over 350 drugs. In general, combination products are not listed. The drug information is presented in three formats: monographs, minimonographs, and comparison charts. The monograph format is used for most drugs. The minimonograph is used for investigational and recently marketed drugs or drugs of lesser importance within a class. The comparison charts are used to give information on members of the same chemical class, different drugs within the same therapeutic class, or to contrast properties of related agents. The monographs, arranged by the pharmacologic-therapeutic classification system of the *American Hospital Formulary Service*, include the following information: names (generic and brand), pharmacology, administration and adult dose, dosage individualism, pediatric dose, dosage forms, patient instructions, pharmacokinetics and biopharmaceutics, adverse reactions, contraindications, precautions, parameters to monitor, and notes.

304. Lewis, Benjamin P., and Leon O. Wilken. **Veterinary Drug Index**. Philadelphia, PA: W. B. Saunders, 1982. 327p. index. \$35.00. LC 78-64711. ISBN 0-7216-5764-8.

This is a comprehensive reference work on dosage, indications, and contraindications of the drugs used in the various species in veterinary practice. It is designed to provide veterinarians, educators, pharmacists, students, and others associated with veterinary medicine monographs containing information on pharmaceutical products, including premixes and having Food and Drug Administration approved usages and indications, and on those licensed biologic products manufactured by establishments licensed also by Veterinary Services, U.S. Department of Agriculture.

There are three main sections: (1) Pharmaceutical products; (2) Premixes; and (3) Biologic products. These sections have indices by therapeutic category and generic, chemical, and trade names. Arranged by the classification used in the *American Hospital Formulary Service* (entry 253), the monographs include the following: names, manufacturer, route of administration, pharmacologic activity, indications for use, species, and dosage.

305. Li Wan Po, Alain. **Non-Prescription Drugs**. Oxford, England: Blackwell Scientific Publications, 1982. 477p. bibliog. index. \$49.95. ISBN 0-632-00857-1.

Intended primarily for pharmacists and pharmacy students, this is a textbook dealing with self-medication. It provides information on nonprescription products and on the conditions for which these drugs are used. Arguments for and against the use of specific products are presented in objective fashion. Throughout the text black dots are placed in the margins whenever the material in that area can be translated into patient advice and when it is especially important.

The first chapter, "Nonprescription Drugs: Perspectives," discusses special groups of patients (such as the elderly and the very young), drug interactions, interference with biochemical tests, adverse effects, the placebo effect, drug combinations, synergism, and pharmacokinetics. The rest of the book is arranged by the target organ as far as possible under these headings: the skin, the oral cavity and the gastrointestinal tract, the upper respiratory tract, the urinary tract, nutrition, the reproductive system, analgesia, the eye, the ear, and malaria. There is an appendix on "Ionizing Constants of Drug Substances."

The book has been well recommended. Although it is British and trade name products mentioned reflect that, similar products are available in the United States in most instances.

306. Loeb, Suzanne, and George Spratto. **The Nurse's Drug Handbook.** With comprehensive nursing implications by Estelle Heckheimer. 3rd ed. New York: John Wiley and Sons, 1983. 1115p. illus. bibliog. index. \$25.95; \$21.50pa. LC 82-16109. ISBN 0-471-09661-X; 0-471-09660-1pa.

The first two editions of this handbook were quite well received, and this edition has been considerably expanded. Designed as a clinically oriented combination text-reference book for both students and staff nurses, the work also has been used by other health care professionals, especially clinical pharmacists. Emphasis is on helping the nurse make knowledgeable observations of the effects of drugs on patients and on promoting patient compliance in their medication regimens.

The material is presented in two parts. The first presents general fundamental drug information, including nursing implications. The second section, which makes up most of the book, presents information on over 1000 drugs grouped in classified arrangement in chapters. Each chapter begins with a review of the drug group, including information such as mode of action, uses, contraindications, untoward reactions, and interactions. Then the most currently used drugs in that class are listed alphabetically with more specific but similar information provided. Nursing implications are printed in red.

A valuable chapter on antineoplastic agents is included. It is especially welcome because this is an increasingly important area of drug administration for nurses. This complex group of drugs is arranged by chemical class.

A great deal of good material is included in this book. There is a glossary, and also 51 tables and appendices as follows: normal physiologic values, poisoning information with a table of toxic agents and their antagonists, a list of commonly prescribed combination drugs with miscellaneous information, sections on controlled substances in the United States and Canada, and a page on Medic-Alert systems.

307. Long, James W. **Clinical Management of Prescription Drugs.** Philadelphia, PA: Harper & Row, 1984. 966p. bibliog. index. \$19.50pa. LC 83-4318. ISBN 0-06-141555-3.

Presenting a new departure in drug compendia for health care professionals involved in the management of drug therapy, this volume brings together all the categories of drug information that have direct relevance to daily practice. The compiler thinks it is the first such publication that attempts to provide all the information categories stipulated in the newly revised labeling requirements issued by the U.S. Food and Drug Administration in 1979. It presents the information in a manner that should facilitate and encourage improved application of the current knowledge in the use of drugs. Long feels that the difficulty in achieving optimal use of drugs comes not so much from lack of information as from its inaccessibility. About 200 drug profiles of

generic drugs are provided, covering more than 1370 brand names. Forty-two different sources of information were used in compiling the profiles.

The first section of the book is an overview of drug information. The medical and surgical, nursing, and pharmacy disciplines are considered. Section 2, the main part, presents the drug profiles. Section 3 lists drugs by classes. Section 4, "Drug Tables," contains the following: drugs and anesthesia, drugs reported to cause nephrotoxicity, drugs reported to cause hepatotoxicity, possible drug effects on male sexuality, and possible drug effects on female sexuality.

The drug profiles, listed alphabetically by generic name, are quite complete, each taking up several pages. The following information is usually provided: generic name, year introduced, brand names and dosage forms available in the United States and Canada, common synonyms (street names), drug class, prescription required (United States and Canada), controlled substance schedule (United States and Canada), dosage ranges, tablet may be crushed or capsule opened for administration (yes or no), duration of treatment, measurement of drug levels in blood and/or urine, how the drug works, how the drug is eliminated, influence on prior disease, benefits and risks, contraindications, conditions or circumstances that require judgment on whether or not to give the drug, precautions for use in infants and children and those over 60, time required for benefit, duration of effects, side and adverse effects, use during pregnancy, potential for dependence, effects to watch for during various situations (driving, exposure to sun, etc.), observation of expiration times, and storage.

In addition to the general bibliography, suggested readings are listed with each profile.

308. Long, James W. **The Essential Guide to Prescription Drugs**. 3rd ed. New York: Harper & Row, 1982. 935p. bibliog. index. \$32.95; \$9.95pa. LC 76-5141. ISBN 0-06-012674-4; 0-06-090715-0pa.

This impressive, well-liked work lists mostly prescription drugs, although a few over-the-counter medicines are also included. It presents monographs (or "Profiles") two or three pages in length, on over 200 drugs, arranged alphabetically by the generic (official) name. In addition, 1450 brand names for drugs marketed in the United States and Canada have been included with the appropriate monographs, and a cross-index has been supplied to assist in locating the proper profile entry. In addition to the profile section (which makes up the bulk of the book), several other sections have been included such as "Glossary of Drug-Related Terms," "Guidelines for Safe Drug Use," "Drug Families," and "Tables of Drug Information." The work is authentic and of high quality. An impressive group of individuals provided assistance, and the best sources of information were consulted in preparing the book. The emphasis is on adverse reactions, drug interactions, and cautions for the patient to observe in using medications.

The book was the first comprehensive source of information on drugs for the patient, although health professionals have used it also. Drug reference works for patients serve a need, and this is one of the best. It is complete enough and on a level to be of value to health professionals as well as to laypersons. Drug information centers particularly can make good use of the book.

309. Malseed, Roger T. **Quick Reference to Drug Therapy and Nursing Considerations**. Philadelphia, PA: J. B. Lippincott, 1983. 974p. index. (Lippincott's Quick References). \$14.50pa. LC 82-9900. ISBN 0-397-54420-0.

Based on a longer work by Malseed, *Pharmacology: Drug Therapy and Nursing Considerations* (1982), this book has been well received even though there are a number of similar compilations available. Although called a "Quick Reference," the book is thick and provides a great deal of information. It is suitable for others of the health professions as well as for nurses. Undergraduate and graduate students in pharmacology, therapeutics, and related sciences can make good use of it. The reader should be knowledgeable in the aforementioned areas to get the most benefit from the text.

Each chapter of the book covers a single class of drugs. There are monographs one-half column to a page in length for each drug. About each is given: names, description, uses, dosage, fate, side effects, adverse reactions, contraindications, interactions, and nursing considerations. Special features include a review of cancer chemotherapy with a listing of currently recognized combination chemotherapy regimens; a chapter on drugs of abuse; chapters dealing with diagnostic agents, serums, vaccines, nutrients, and electrolytes; and an extensive tabular listing of antimicrobial drugs.

The book has been well received, although it has been criticized because it contains no literature references.

310. Marler, E. E. J., comp. **Pharmacological and Chemical Synonyms: A Collection of Names of Drugs, Pesticides and Other Compounds Drawn from the Medical Literature of the World**. 7th ed. Amsterdam, The Netherlands: Excerpta Medica, 1983. 514p. \$76.50. LC 82-5004. ISBN 90-219-3061-7.

This is an alphabetical compilation of about 120,000 terms used for drugs, pesticides, and other substances of pharmacologic and biochemical interest. The main entries are nonproprietary names, generally the international one, followed by synonymous names (including chemical and other nonproprietary names), research code numbers, and trade names. All other entries are cross-referenced to the main entry. This is a valuable reference work.

311. Mason, David, and Fran Dyler. **Pharmaceutical Dictionary and Reference for Prescription Drugs**. Rev. ed. New York: Playboy Paperbacks, 1982. 270p. illus. (col.). index. \$3.50pa. LC 81-82969. ISBN 0-872-16998-7.

This guide is designed to provide the patient with information on more than 650 commonly prescribed drugs, information that will help him avoid problems. Included are instructions about how and when to take specific medicines and possible dangers such as allergic reactions, side effects, and interactions with other drugs or alcohol. It is presumed that the physician or pharmacist may not instruct and inform the patient adequately, a reasonable concern.

The material is arranged by type of medication, for example, analgesics, tranquilizers, or antihypertensives. There are also chapters on interactions, new uses for old drugs, new drugs, the future of medicine, talking to the physician, and answers to questions about the drug business. In addition, there are a few pages of color plates illustrating common tablets and capsules. An index of trade, generic, and drug class names is included.

The book is well written, at the proper level for the patient, and contains good, authoritative advice. Most laypersons could benefit from reading the entire book, as well as using it for reference.

An earlier edition of the book was called *Bitter Pills*.

312. **Medication Teaching Manual: A Guide for Patient Counseling.** 3rd ed. Bethesda, MD: American Society of Hospital Pharmacists, 1983. 342p. illus. index. \$20.00pa. ISBN 0-930530-31-4.

The main part of this work is a list of monographs describing about 200 of the most popular medicines being prescribed in the United States. The material is intended for the patient. The book states that health care personnel may reproduce monographs from the manual to distribute to patients (provided the proper acknowledgement is included).

The monographs are arranged alphabetically by generic name. The index also includes brand names. The information about the drugs is presented in question-and-answer format as follows: (1) Why is this drug prescribed? (2) When should it be used? (3) How should it be used? (4) What special instructions should I follow while on this drug? (5) What storage conditions are necessary for this drug? (6) What should I do if I forget to take a dose? (7) What side effects can this drug cause? What can I do about them? (8) What other precautions should I follow while using this drug?

Appendices include diagrams on how to administer certain kinds of medications and a bilingual directory of prescription orders.

313. Michaels, Rhoda M., and G. R. Brown, eds. **Drug Consultant, 1985-1986: The Pocket Clinical Guide to Drugs and their Usefulness.** Based on the British National Formulary. New York: John Wiley and Sons, 1985. 383p. index. \$18.95pa. ISBN 0-471-80894-6.

Intended for those concerned with the prescribing, dispensing, and administration of medicines, this pocket guide is a United States version of the successful *British National Formulary* (entry 260). It is to be issued biannually.

The drugs are listed in 15 chapters organized by organ systems. Indications, cautions, contraindications, side effects, dosages, and practical advice are given. Included are many drugs not listed in the *Physicians' Desk Reference* (entry 335), investigational drugs, and "relative price bands" (figures representing the cost of a preparation based on the average wholesale price). An appendix covers drug interactions, and there is an index of manufacturers as well as a general index.

314. Miller, Russell R., and David J. Greenblatt, eds. **Handbook of Drug Therapy.** New York: Elsevier, 1979. 1126p. bibliog. index. \$47.25; \$29.95pa. LC 79-10559. ISBN 0-444-00329-0; 0-444-00253-7pa.

Intended to be a concise, authoritative, and scholarly guide to the clinical use of drugs, this handbook critically reviews indications, contraindications, adverse effects, interactions, dosage, preparations, and costs of commonly used drugs. In some instances the pharmacologic properties, mechanisms of action, and pharmacokinetics of individual drugs are discussed in detail. Many physicians and pharmacists have contributed to the book. They have identified what they believe to be the drugs of choice and have provided extensive literature references. Brief discussions of disease states have been included. A few categories of drugs are not included, for example, those used primarily by specialists such as general anesthetics. Important investigational drugs are covered, however.

The book includes 67 chapters, grouped by general classes of drugs as follows: (1) Antimicrobial agents; (2) Parasitocidal agents; (3) Oncolytic agents; (4) Cardiovascular-renal agents; (5) Analgesics and narcotic antagonists; (6) Psychotropic drugs; (7) Other drugs affecting the central nervous system; (8) Agents affecting blood; (9) Homeostatic and nutritional agents; (10) Hormones and agents affecting hormonal mechanisms; (11)

Drugs used in respiratory and allergic disorders; (12) Drugs used to treat neuromuscular disorders; and (13) Gastrointestinal agents. Most chapters are presented in two sections, a discussion of general principles and individual drug monographs. Most chapters also contain a table describing available preparations and their costs, the latter taken from the 1978 *Drug Topics Red Book* (see entry 274).

This is an outstanding and authoritative work that is not difficult to read.

315. Modell, Walter, ed. **Drugs of Choice, 1984-1985**. 14th ed. St. Louis, MO: C. V. Mosby, 1984. 824p. bibliog. index. \$54.95. LC 58-6889. ISBN 0-8016-3523-3.

This well-known work is revised every two years. The editor, a noted expert in the field, has been assisted by a large number of contributing authorities. The book is a practical guide to the selection of the best drug for a particular clinical situation. Each chapter takes up a specific therapeutic classification of drug such as analgesics, diuretics, and so forth. In addition, there are some chapters on special topics such as adverse drug reactions and drugs and advanced age.

This reference work is valuable to physicians, pharmacists, and medical educators. No other reference work serves quite the same purpose.

316. **Modern Drug Encyclopedia and Therapeutic Index**. Edited by Arthur J. Lewis, Gertrude Dittus Gonzales, and Charles L. Winek. 16th ed. New York: Yorke Medical Books, 1981. 1066p. index. LC 34-12823. ISBN 0-914316-21-4.

This well-liked compendium of drug information is kept up to date by a periodical supplement, *Modern Drugs*. The encyclopedia is intended primarily as a ready reference tool for finding information on the therapeutic preparations available to the physician. It is not a textbook of pharmacology or a manual of therapeutics.

Introductory material consists of a glossary, a table of drug and chemical blood level data (a unique feature), and a review of the Controlled Substances Act of 1970. The main section provides monographs, arranged alphabetically by generic name and about a page in length, on pharmaceuticals and biologic agents. Also included throughout are specific monographs on certain groups of drugs such as the adrenal corticosteroids or the insulins. There are three indexes: therapeutic, manufacturers, and general. The general index includes generic and trade names.

The following information is included in the monographs: chemical names, description, indications, contraindications, warnings, precautions, adverse reactions, dosage and administration, availability (trade names of products are listed here), and manufacturer. Combination products are described under their trade names.

317. **Multi-Source Drug Products**. 2nd ed. Derived from the Drug Products Information File. Washington, DC: American Society of Hospital Pharmacists (4630 Montgomery Ave., Washington, DC 20014), 1977. 149p. index. LC 77-85173. ISBN 0-930530-4.

Although somewhat out of date now, this computer-produced publication may perhaps still be useful as a convenient listing of drug products that are available from two or more vendors. The information is arranged to facilitate comparison among products.

The drug products listing is in two parts: single-ingredient products and multi-ingredient products. In the first part, products are arranged alphabetically by generic name, and each entry includes therapeutic category, dosage form, route of administration, strength, brand name, labeler name (vendor), and package information. In the part listing products containing more than one active ingredient, arrangement is by therapeutic classification. These entries provide information

comparable to that in the first section. There are several appendices, including an outline of the classification system used, a list of labelers, and packaging information.

318. **NCI Investigational Drugs: Pharmaceutical Data, 1985.** Bethesda, MD: U.S. Department of Health and Human Services, Public Health Service, National Institutes of Health, National Cancer Institute, 1985. bibliog. index. 192p. (NIH Publication 85-2141). \$10.00pa.

Designed to provide product information to health care practitioners who utilize investigative drug products for cancer trials, this annually revised work presents monographs on most of the investigational agents currently distributed by the Division of Cancer Treatment, National Cancer Institute. Products available commercially in the United States are not included because pharmaceutical information about them is available elsewhere (e.g., the accompanying package insert).

Product information is presented in a uniform manner that emphasizes handling procedures. Each monograph includes the name of the drug (the United States Adopted Name if available), structural formula, chemical name, other names, molecular formula and weight, how supplied, solution preparation, storage information, stability, cautions, and route of administration. Literature references are provided occasionally. About 80 drugs are listed, five of them new since the previous edition was published.

A companion volume to this work is also available, *NCI Investigational Drugs: Chemical Information*. It provides selected chemical and physical data about the drugs. Information provided includes structure, alternate names, solubility, ultraviolet absorption, and high performance liquid chromatography and gas-liquid chromatography methods of identification.

319. **National Drug Code Index.** Garden City, NY: Ext. Pharm. Data, Inc., 1976- . Annual.

This publication was initiated because of an increasing need for a directory that would accommodate the needs of two principal groups: those needing identification of a drug product by product or generic company name, dosage form, and strength regardless of how the product is packaged; and those who need information about package forms and sizes. The information listed has been compiled from questionnaires mailed to companies.

There is a product index by labeler that lists product names alphabetically by company. Product and package codes are followed by product name, form, strength, and package size. The alphabetical product index provides labeler code, product code, and basic trade package sizes, followed by product name, company short name, form, strength, and package size. Also included is a company index by labeler code. All companies whose products are listed appear numerically by their labeler codes with addresses and short name.

320. Negwer, Martin. **Organic-Chemical Drugs and Their Synonyms: An International Survey.** 5th ed. Rev. and enl. Berlin, Germany: Akademie-Verlag; New York: Verlag Chemie International, 1978. 3 volumes. index. ISBN 0-89573-100-2.

This valuable work lists 6664 organochemical drugs, which are chemically unified by molecular formula definition, and more than 60,000 synonyms. The drugs are arranged by incremental molecular formula in two columns to the page format. Each drug is numbered consecutively. Each entry includes Chemical Abstracts Service number, structural formula, systematic names, references (suggestions as to the identity of the salts derived from the acids or bases listed), synonyms, and use.

The first two volumes contain the monographs and a short supplementary section that lists drugs that came to the attention of the compiler after the main list was assembled. Volume 3 is the index section. There are three indexes: group, Chemical Abstracts Service number, and synonym.

The work is quite comprehensive and contains more chemical information than is usually supplied in drug compendia.

321. New Drugs Annual: Cardiovascular Drugs. Edited by Alexander Scriabine. New York: Raven Press, 1983-. Annual. About \$50.00 per volume. ISBN 0-089004-730-8 (Volume 1); 0-89004-931-9 (Volume 2).

This is a new series that presents comprehensive reviews of new cardiovascular drugs that have recently been introduced on the U.S. market or are in advanced stages of clinical development. Most of the contributors are industrial researchers who were involved in the development of the drugs described.

The drugs are classified and arranged in accordance with their major use, for example, antihypertensive drugs, antiarrhythmic drugs, vasodilators, and so on. The format for each chapter usually follows a set pattern: introduction, chemistry, animal pharmacology, clinical pharmacology, and summary. The volumes also contain a chapter on regulatory aspects of drug development.

The series is of interest to both clinical and basic researchers in the field of cardiovascular drugs. Clinicians can make some use of it, but there is no way of ascertaining which drugs will ultimately be approved for marketing.

322. Nonproprietary Name Index. Englewood, CO: Paul de Haen International, 1941-. Annual of recent years. \$195.00 per year.

Each edition of this index supersedes the previous one, covering single drugs from 1941 to the present for U.S. drugs and from 1969 to the present for European and Japanese products. The product listings provide nonproprietary names, trademarks, therapeutic classification, manufacturer, originator, country of origin, and year of introduction.

Paul de Haen also publishes other indexing and statistical marketing data pertaining to new and recently introduced drugs. These include *New Product Survey*, *New Drug Analysis* (for the United States, Europe, and Japan), and *New Drug Parade*. These are annual publications except for *New Product Survey*, which is also published monthly in bound report format.

323. Noone, Paul. A Clinician's Guide to Antibiotic Therapy. 2nd ed. Oxford, England: Blackwell Scientific Publications; distr. St. Louis, MO: Mosby, 1979. 138p. index. \$13.25pa. ISBN 0-632-00537-8.

Intended as a commonsense guide to the clinical use of antimicrobial chemotherapy, this small book deals with common conditions occurring in the hospital and general practice. The aim is to minimize risks to the patient and at the same time avoid iatrogenic hazards.

The introductory section of the presentation, "Recommendations for Antibiotic Treatment," presents general considerations. The next sections are headed as follows: Bacteraemia/septicaemia; brucellosis; central nervous system; endocarditis; enteric fever; gastrointestinal tract; upper and lower respiratory tract; malaria; othropaedic; pyrexia of unknown origin; soft tissues; urogenital tract; and tuberculosis. The monographs provided in these sections include probable pathogens, recommended antibiotics, and dosage. Second choices of medication are often indicated. The

remainder of the book (about a third of it) lists antibiotics by type or by name with route of administration, dosage, uses, toxicity, and comments given.

324. **Nursing 84 Drug Handbook.** Springhouse, PA: Intermed Communications, 1984. 850p. index. (Nursing 84 Books). \$17.95. ISBN 0-916730-62-X.

A leading reference book on drugs (for nurses), this publication lists more than 1000 products currently used in the United States and Canada. It is a joint effort by pharmacists and nurses that emphasizes the clinical aspects of drugs.

The work is arranged in several sections. The first, General Information, provides brief material on drug actions, reactions, and interactions, and on drug therapy in children and the elderly. For the most part, the following sections take up each body system (e.g., cardiovascular, respiratory, etc.) and discuss the drugs that are used for disorders of each. However, there are also sections on infection and infestation, hormones, fluid and electrolyte balance, antineoplastics, anesthesia, nutrition, and miscellaneous categories. Within each section there are several chapters that divide the drugs into smaller categories. A typical chapter begins with an alphabetically arranged list of the generic names of drugs described in that chapter. Each drug's or drug group's mechanism of action is summarized. Then a list of combination products containing these drugs is given. Next the drugs are listed alphabetically by generic names with trade name(s), indications and dosage, side effects, interactions, and nursing considerations provided. If a drug is a controlled substance, this fact is noted.

The impressive list of nursing considerations provided with each entry is perhaps the most notable feature of the work.

325. Ornato, Joseph P., and John A Romankiewicz, eds. **Handbook of the Pharmacology of Emergency Drugs for Paramedics.** Hamilton, IL: Drug Intelligence Publications, 1977. 95p. bibliog. \$6.00pa. LC 77-89812. ISBN 0-914768-26-3.

The editors of this pocket-sized book intended to provide the basic fundamentals of pharmacy, with an emphasis on the adverse effects of drugs. The 29 drug monographs discuss the most commonly used drugs in emergency care. The following information is usually included in the monographs: generic and trade names, pharmacologic effects, metabolism, indications, contraindications, use with caution, dosage and administration, and adverse effects. Other sections of the book include a discussion of the principles of absorption, distribution, metabolism, and excretion of drugs; drug receptor relationships of the autonomic nervous system; a short glossary of commonly used pharmacologic terms; and calculation considerations.

326. Osol, Arthur, and Robertson Pratt, eds. **The United States Dispensatory.** 27th ed. Medicinal chemistry editor, Alfonso R. Gennaro. Philadelphia, PA: J. B. Lippincott, 1973. 1287p. bibliog. index. \$30.00. LC 73-2673. ISBN 0-397-55901-1.

This monumental work is a later edition of an old classic. Basically, the dispensatory presents a collection of articles, alphabetically arranged, about individual drugs. The length of each article is longer than that in most drug compendia, a page to several pages (as compared with a half-page in most of the other compendia). The articles contain such information as chemical, generic, and brand-name nomenclature; chemical structure; a summary of method of synthesis or other form of preparation; pharmacologic action; therapeutic uses; contraindications; untoward effects; warnings and precautions; drug interactions; dosage; and dosage forms. There are also general articles on classes of drugs such as antibiotics, antihistamines, and so on. The work is intended to provide pharmacists with a source of information so that they may help

physicians, other health professionals, and patients with proper information on the use of drugs. Much of this information is from scientific journals, and the references are included in the text.

The older editions of this work (up to the 26th) were much larger volumes. The reduction in size was brought about by deleting older drugs, botanic descriptions, and explanation of physical and chemical tests and assays for drugs. The older editions are sometimes consulted for this material.

327. **The Osteopathic Physician's Compendium of Drug Therapy.** New York: Biochemical Information Corporation, 1980/81-. Annual. Free to selected physicians. ISSN 0272-7064.

This compendium is kept up to date by supplements included in issues of the periodical *Drug Therapy* (see entry 792). It covers about 95 percent of the medications prescribed by primary care physicians. Summary tables provide information on less frequently prescribed drugs; the other drugs are described in monographs arranged by therapeutic category. The index lists both brand and generic names of the drugs.

The information provided is based primarily on recent package literature. It includes names (generic and brand), manufacturer, indications, dosage, contraindications, warnings, precautions, adverse reactions, overdose, interactions, and altered laboratory values. A drug identification section of colored illustrations is included.

328. Pagliaro, Louis A., and Robert H. Levin. **Problems in Pediatric Drug Therapy.** Associate editor: Eric T. Herfindal. Hamilton, IL: Drug Intelligence Publications, 1979. 313p. bibliog. index. \$19.00. LC 78-50204. ISBN 0-914768-29-8.

This handbook was written for all practitioners involved in pediatric care and for students, interns, and residents who are learning about the field. It presents a concise, referenced, and accessible compilation of clinical and pharmacologic data concerning the use and effects of drugs on the fetus, infant, and child.

Each chapter covers a major problem area in pediatric drug therapy as follows: (1) Teratogenesis; (2) Drugs excreted in breast milk; (3) Adverse drug reactions in children; (4) Pediatric poisoning; (5) Drug dosing in neonates; and (6) Drug dosing in children. Much of the material is presented in long tables.

The drugs discussed are referred to and indexed by their nonproprietary names. However, a trade name index is included as well as a nonproprietary name index.

329. Parish, Peter. **The Doctors and Patients Handbook of Medicines and Drugs.** New York: Alfred A. Knopf, 1977. 412p. bibliog. index. \$7.95pa. LC 76-30658. ISBN 0-394-73337-1pa.

Parish, a physician, has compiled information about prescription and over-the-counter drugs for both the professional and the layperson, especially the latter.

The material is divided into three parts: Part 1, "Basic Principles of Drug Use," provides background knowledge. Part 2, "Groups and Types of Drugs," is organized according to commonly occurring disorders and the drugs used to treat them. Each section ends with comments about the drugs of choice. Part 3, "Pharmacopeia," lists drugs alphabetically in monographs that provide basic information in dictionary fashion. The reader is usually referred back to Part 2 for a discussion of the drug in its therapeutic category. Many cross-references are provided to other names; altogether

there are about 1500 entries. Main entries tell what the drug is used for, possible side effects, possible drug interactions, precautions, and dosage.

Good, complete discussions are provided.

330. Patterson, H. Robert, Edward A. Gustafson, and Eleanor Sidor Sheridan. **Current Drug Handbook, 1984-1986**. Philadelphia, PA: W. B. Saunders, 1984. 283p. index. \$16.00pa. LC 83-15330. ISBN 0-7216-1223-7.

Earlier editions of this publication were prepared by Mary W. Falconer. It is being revised every two years. Information in tabular form is presented on approximately 1500 selected drugs. It is intended primarily for nurses or nursing students, and it supplies information supplemental to Part II of *The Drug, the Nurse, the Patient* (4th ed., Saunders, 1970), a textbook by the same authors. The book is arranged with drugs of like uses grouped together, for example, "Drugs Affecting the Central Nervous System." However, an index by drug name also has been supplied. The following information is included in the tables: (1) Name, source, synonyms, and preparations; (2) Dosage and administration; (3) Uses; (4) Action and fate; (5) Side effects and contraindications; and (6) Nursing implications and remarks. Also included is a tabulation of normal laboratory values of clinical importance.

For the most part, the handbook has considered only active principles of individual drugs rather than the many mixtures available, and only drugs in general use have been included. This limits the number of names listed, so many users will need more complete lists to identify some medicines.

331. Pawlina, Albert M. **The Family Prescription and Medication Guide**. Edited by Lawrence J. Lesko. Englewood Cliffs, NJ: Prentice-Hall, 1979. 367p. bibliog. \$6.95pa. LC 79-325. ISBN 0-13-302828-3pa.

Written by a pharmacist, this is another consumer-oriented book on medications. This one is perhaps less well liked than some others of its type, but it is authentic. Relatively few drugs are discussed.

The material is presented in several parts. An introduction discusses how the consumer can be an active participant in his own health care. The main section, "Prescription Drug Summary," is in dictionary format, listing the most common prescription drugs by generic name. Information provided includes brand names, description, uses, manufacturer, side effects, and instructions on how to take the drug. The next section is an index correlating generic and trade names. A glossary is provided. The appendix contains some useful material such as a table of food/drug interactions, information on blood pressure values, U.S. recommended daily allowances for vitamins and minerals, first-aid measures for poisoning, and immunization information.

332. Perry, Paul J., Bruce Alexander, and Barry I. Liskow. **Psychotropic Drug Handbook**. 3rd ed. Cincinnati, OH: Harvey Whitney Books (4906 Cooper Rd., P.O. Box 42442, Cincinnati, Oh 45242), 1981. 198p. bibliog. index. LC 81-51776. ISBN 0-96064881-X.

The material presented in this small handbook is intended for use by all who are involved in the treatment of psychiatric patients. It presents the authors' views of the proper use of psychotropic medications.

The material is presented under these headings: (1) General principles—therapeutic uses; (2) General principles—adverse effects; (3) Antipsychotics; (4) Antidepressants; (5) Lithium; (6) Antianxiety agents (anxiolytics); (7) Hypnotics; (8) Analgesics; (9)

Agents for treating extrapyramidal side effects; (10) Disulfiram; (11) Drug interactions; (12) Management and treatment of drug overdosage; (13) Management of withdrawal; (14) Amytal interview; and (15) Electroconvulsive therapy (ECT).

The information about individual drugs is presented in various ways. There are some lists and tables and some individual monographs. For the most part, however, the drugs are discussed in groups with various kinds of information provided. Cost information has been included, the direct cost from the manufacturer, so a comparison can be made between agents.

333. The Pharmaceutical Codex: Incorporating the British Pharmaceutical Codex. 11th ed. Prepared in the Department of Pharmaceutical Sciences of The Pharmaceutical Society of Great Britain and published by direction of the Society's Council. London, England: The Pharmaceutical Press, 1979. 1101p. index. \$75.00. ISBN 0-85369-129-0.

The first edition of this book was published in 1907 under the title *The British Pharmaceutical Codex*. It has been much revised and extended in scope in subsequent editions. The book was designed to supplement the *British Pharmacopoeia* (see entry 94) by providing information on actions, uses, and undesirable effects of pharmaceutical substances and formulas and standards for a range of materials not included in the *Pharmacopoeia*. The work once provided official standards along with the *Pharmacopoeia*, but in 1972 it was decided that only the *Pharmacopoeia* would provide official standards of identity and quality.

The *Codex* now covers many aspects of pharmacy, pharmacology, and analysis, and it also provides basic information on diseases and other medical subjects. It is arranged like an encyclopedia with over 1400 entries in one alphabetical sequence. It contains a detailed subject index. Appendices include a list of reagent solutions and over 300 infrared spectra.

The drug entries usually provide the following information: chemical structure, names and synonyms, physical characteristics, stability, incompatibility, storage, identification, metabolism, uses, actions, undesirable effects, precautions, veterinary uses (if appropriate), and literature references.

334. PharmIndex. Portland, OR: Skyline Publishers (P.O. Box 1029, Portland, OR 97207), 1958-. Monthly. \$89.00 (new subscription), \$67.50 (renewal). ISSN 0031-7152.

This pharmaceutical reference source is updated monthly with magazine-like issues that can be accumulated and filed chronologically in a binder. These issues contain new product listings with data on costs and prices, product changes, listings and indexing of research drugs pending release to the market, and review articles (one each month) on various classes of drugs. There is fourway indexing by trade name, manufacturer, generic composition, and therapeutic use. The indexes are cumulated at regular intervals.

This is a good source of information on new drugs.

335. Physicians' Desk Reference. Oradell, NJ: Medical Economics, 1947-. Annual with supplements. \$29.95.

The *PDR* is the best known and most used compilation of drug information. It is published with the cooperation of the manufacturers whose products are listed. It is intended primarily for physicians but is also used by nurses, pharmacists, and other health sciences personnel. Its purpose is to make available essential information on major pharmaceuticals and diagnostic products. Supplements are issued several times a year to keep the publication up to date. The product descriptions that make up the bulk

of the volume are prepared by the manufacturers of the drugs. Over 2500 products are included, and recent volumes have been over 3000 pages in length.

The compilation is in several parts, each printed on different-colored pages. They are: (1) Manufacturers' index; (2) Product name index and discontinued products; (3) Product category index; (4) Generic and chemical name index; (5) Product identification section (colored photographs of capsules and tablets); (6) Product information section (the largest section, arranged by manufacturer); and (7) Diagnostic product information. Also included is a section on management of drug overdose, prepared by the Institute for Clinical Toxicology, Department of Medicine, Baylor College of Medicine. In addition, there is a list of Poison Control Centers.

The product information section provides the following information about the drugs: indications and usage, dosage, administration, description, clinical pharmacology, supply, warnings, contraindications, adverse reactions, overdosage and precautions, and other information concerning their use, including common names, generic compositions, or chemical names. Many of the monographs are several columns in length.

Three other special editions of the *PDR* are published, the *PDR for Nonprescription Drugs*, the *PDR for Ophthalmology*, and the *PDR for Radiology and Nuclear Medicine* (see entries 336, 337, and 338).

336. Physicians' Desk Reference for Nonprescription Drugs. Oradell, NJ: Medical Economics, 1980-. Annual.

Although intended for the physician or pharmacist, this directory of over-the-counter drugs and products contains a great deal of information that might be useful to the patient. It contains descriptions supplied by the manufacturer about the products. Self-medication continues to evolve in the American health care delivery system. The U.S. Food and Drug Administration has itself added impetus through the OTC review, an exhaustive evaluation of ingredients found in over-the-counter medicines.

The book contains three sections: (1) Manufacturers' index; (2) Product name index; (3) Product category index; (4) Active ingredient index; (5) Product identification section (colored illustrations of capsules, tablets, etc.); (6) Product information section (the main part); (7) Diagnostics, devices, and medical aids; (8) Educational material (books and brochures made available by manufacturers and list of organizations to contact for help with health problems); (9) Common health problems (guide to self-treatment); (10) Directory of Poison Control Centers; (11) Glossary; (12) Personal health diary; and (13) First-aid measures for possible poisoning.

The product information section provides information similar to that of the *Physicians' Desk Reference* (see entry 335), the parent publication.

337. Physicians' Desk Reference for Ophthalmology. Oradell, NJ: Medical Economics, 1972-. Annual.

Intended to provide ophthalmologists with information on pharmaceutical and other products used exclusively in their practice, this reference book is published with the cooperation of the manufacturers whose products are described. Some of the products are also listed in the *Physicians' Desk Reference* (see entry 335), but most, because of their specialized use, are not included in that parent publication. This specialized *PDR* contains an additional feature in that it provides basic text information relating to the practice of ophthalmology.

The work is in several parts. There are six indexes: manufacturers, product name, generic name, product classification, instrumentation, and educational material. The

next sections discuss pharmaceuticals in ophthalmology, suture materials and needles, ophthalmic lenses, vision standards, and low vision and present a guide to the evaluation of permanent visual impairment. Section 7, "Product Information," is the main part, listing pharmaceutical products and lens care products. There are monographs on each that give information similar to that of the other *PDRs*: description, action, indication, warnings, adverse reactions, dosage and administration, and how supplied. Section 8 lists specialized instruments, equipment, lenses and accessories, and sutures. There are a number of illustrations. Section 9, on educational materials, alphabetically lists publishers and books available for the ophthalmologist. The last section contains a glossary, a list of abbreviations, and some charts.

Like the other *PDRs*, this one is widely used.

338. Physicians' Desk Reference for Radiology and Nuclear Medicine. Oradell, NJ: Medical Economics, 1971- . Annual.

This *PDR* is intended to provide physicians practicing in the fields of radiology and nuclear medicine with information on pharmaceutical products of interest to them. Some of the products listed will also be included in the *Physicians' Desk Reference* (see entry 335), but most, because of their specialized use, are not included in that parent publication. The publication under review contains a special feature in that it provides basic text information relating to the practice of nuclear medicine.

The work is in several parts. The indices are in six sections: manufacturers, brand name, generic name, product classification, instrumentation, and educational material. The first section is on nuclear medicine, the second on radiology, and the third on ultrasound. Section 4 is an appendix of useful tables. Section 5, "Product Information," is the main part of the book. Presented there are monographs on each product that give information similar to that of the *Physicians' Desk Reference*: description, action, indications, warnings, adverse reactions, dosage and administration, and how supplied. Section 6 lists specialized instruments and equipment and radiographic film and accessories. Section 7 alphabetically lists publishers and their current books pertaining to radiology and nuclear medicine.

339. Professional Guide to Drugs. 2nd ed. Springhouse, PA: Intermed Communications, 1982. 1024p. illus. (part col.). index. \$18.95. LC 82-6120. ISBN 0-916730-51-4.

Compiled by a large group of health care professionals, this book is a dependable reference source for physicians, nurses, dentists, pharmacists, and those who take medicines. More than 1100 drugs are listed, grouped into 105 classes based on their pharmacologic action and into 15 major drug sections by clinical use or by the body system they act on. In addition, there is an introductory general section covering pharmacology; drug therapy in adults, children, and the elderly; intravenous solution compatibility; and recognizing common drugs of abuse. Also included is a special color section identifying drugs that are often abused. An appended section provides instructions for managing drugs that produce acute toxicity.

The drug monographs usually provide the following information: synonymous names, dosage instruction, indications, side effects, interactions, cautions, suggestions for administration and patient comfort, storage instructions, and preparation. At the beginning of each chapter there is a section covering major uses of the drugs in the category being discussed; mechanisms of their action; absorption, distribution,

metabolism, and excretion of the drugs; and information about their onset and duration of action. Combination products are listed.

340. **Repertorio Terapeutico, Medicamento.** (Drugs International Index). Edited by Lucio Marini. 6th ed. Milano, Italy: Organizzazione Editoriale Medico-Farmaceutica, 1979. 1068p. bibliog. index. \$75.00.

This is an international guide to drugs that are listed under both English and Italian generic names. It contains virtually all drugs available in Italy and many others from the *European Pharmacopoeia* (see entry 96).

The drug monographs include the following information: international nonproprietary names in Latin, English, French, and Italian; molecular formulas; precautions; dosages; and other essential properties.

341. Romankiewicz, John A., Ann Capelli, and Vincent Gotz. **Handbook of Essential Drug Therapy for Critical Care Nurses.** Hamilton, IL: Drug Intelligence Publications, 1980. 211p. index. \$12.50pa. LC 79-90429. ISBN 0-914768-35-2.

This handy pocket-sized book provides essential information on medications that are commonly employed in critical care medicine.

There are several short introductory chapters on the following topics: (1) Introduction; (2) Principles of drug administration; (3) Drugs and receptor sites; (4) Considerations for the preparation of intravenous admixtures; (5) Calculations and conversions; and (6) Intravenous flow regulators. The main section presents concise monographs on about 70 drugs, which are listed by nonproprietary name (with some trade names also given). The following information is usually included: pharmacologic effect, metabolism and excretion, indications, contraindications, use with care in what situations, therapeutic goals, dosage and administration, adverse effects, and nursing implications.

Both hospital pharmacists and nurses use this handbook.

342. Rossoff, Irving S. **Handbook of Veterinary Drugs: A Compendium for Research and Clinical Use.** New York: Springer, 1974. 730p. index. \$58.50. LC 73-88322. ISBN 0-8261-1530-6.

The bulk of this work is a comprehensive list of about 2000 veterinary drugs, old and new. The arrangement is alphabetical by generic name. However, to make location of information possible if this name is not known, an index of other names has been provided. With each entry is given such information as synonymous names, class of drug, uses, warnings about adverse effects, and dosages for a number of different animals. In some instances doses for exotic, zoo, and experimental animals are included. Although most of the monographs are short, a few are a half-page or more in length. In addition, there are several useful appendices of equivalents, notably one of approximate equivalents useful for mixing pharmaceuticals with feed.

This compilation should prove very valuable as it is needed. There are few lists of veterinary drugs of this scope.

343. **Rote Liste.** AulendorfWürtt: Edition Cantor KG, 1935-. Irregular.

This work is described as a "Verzeichnis von Fertigarzneimitteln der Mitglieder des Bundesverbandes der Pharmazeutischen Industrie e.V." It is a comprehensive guide to pharmaceutical specialties available in West Germany. The main section lists preparations by trade name in classified arrangement. The short monographs contain

basic information about the products such as manufacturer, packaging, uses, dosage, ingredients, and indications.

Other sections, printed on colored pages, provide other avenues to the drug information such as a list by generic name (usually the International Nonproprietary Name) and a list of drug firms with addresses.

344. Rubinstein, Morton K. **A Doctor's Guide to Nonprescription Drugs**. New York: New American Library, 1977. 195p. index. (A Signet Book). \$2.25pa. ISBN 0-451-07769-5.

Written by a physician for the layperson, this book serves as a guide to the selection of nonprescription drugs for common ailments. It assists the reader in choosing a suitable medication, warns of possible side effects, and indicates approximate retail price.

The work consists of 16 chapters, each on a different disease condition or symptom (e.g., common cold, indigestion, headache). Each chapter contains a good deal of valuable text information about the condition in question, giving causes, suggested treatments, and differentiation of symptoms that can be self-treated from those that should be brought to a physician's attention. Recommended nonprescription medicines are described and listed in charts according to their effectiveness and possible side effects. Approximate prices for recommended and acceptable products are given. Lastly, unrecommended drugs are listed. Reasons for not recommending these drugs are indicated (e.g., ineffective or unnecessary ingredients).

The book is useful for ready reference because it contains a subject and drug name index. The advice given is generally sound, and the text is well written.

345. Shirkey, Harry C., ed. **Pediatric Therapy**. 6th ed. St. Louis, MO: C. V. Mosby, 1980. 1321p. illus. bibliog. index. \$67.50. LC 80-14601. ISBN 0-8016-4596-4.

The author of this comprehensive classic work is a pharmacist and physician. The book attempts to bring the latest word to those who treat children and young people perhaps through their teens. Emphasis is on drug therapy, but the coverage is quite broad and includes other therapy and a good deal of information about diseases.

The material is presented in 20 parts: (1) Drug treatment—fundamentals; (2) Adverse drug reactions; (3) General therapy; (4) Treatment of symptoms; (5) The newborn infant; (6) Infectious diseases (in newborn, bacterial diseases, systemic diseases, viral diseases, parasitic diseases, spirochetal diseases, mycotic diseases, and rickettsial diseases); (7) Pediatric psychiatry; (8) Digestive diseases; (9) Respiratory system; (10) Cardiovascular system; (11) Rheumatic diseases; (12) Disorders of the genitourinary system; (13) Metabolic disorders; (14) Skin disorders; (15) Allergic disorders; (16) Eye disorders; (17) Disorders of the nervous system; (18) Hematology and oncology; (19) Surgery; and (20) Table of drugs.

The table of drugs includes doses, their chemical monitoring, generic and trade names, contraindications for use, warnings, precautions, adverse reactions, toxicity, and availability.

346. Silverman, Harold M., and Gilbert I. Simon. **The Pill Book**. New York: Bantam Books, 1979. 417p. illus. (col.). bibliog. index. \$2.95pa. ISBN 0-553-12781-0.

This book was written by two hospital pharmacists for the consumer to provide information about commonly prescribed drugs. It is not intended to substitute for professional care; it will, however, confirm, underscore, or add to what the physician or pharmacist says in regard to the patient's medicine. Also, it can point the patient in the

right direction if he suspects that his body may not be suited to a certain drug. About 1000 drug products are included in the compilation. The entries are arranged by brand or generic name (the index lists both names). Information given with each entry includes other names for the drug, type, reasons the drug is prescribed, cautions or warnings, possible side effects, possible adverse effects, interactions possible with other drugs or foods, usual dose, overdosage symptoms, storage, and special information to amplify knowledge. In addition, supplementary material has been provided such as a section on how certain drug types work, a section on how foods and drugs may interact, and a glossary.

There are a number of works similar to *The Pill Book* that provide drug information for consumers. This book, however, is somewhat unique in that it provides colored illustrations of the drugs to assist in identification, a feature not usually found in books for laypersons.

347. Sittig, Marshall. **Veterinary Drug Manufacturing Encyclopedia**. Park Ridge, NJ: Noyes Publications, 1981. 507p. bibliog. index. \$64.00. LC 81-16815. ISBN 0-8155-0870-0.

A handy, quick reference volume, this work gives details about the manufacture of more than 500 major veterinary drugs, arranged alphabetically by generic name. The information was taken from the patent literature.

Each entry includes drug function, chemical name, common name(s), structural formula, trade name(s), manufacturer, manufacturing method, and literature references. There is a trade-name index.

348. Slack, R., and A. W. Nineham. **Medical and Veterinary Chemicals**. Oxford, England: Pergamon Press, 1968. 2 volumes. bibliog. index. LC 66-28423. ISBN 08-203609-8.

The first two parts of this work are included in Volume 1; Part 3 makes up Volume 2. The book, written by chemists, is an account of the pharmaceutical industry. It does not discuss the detailed chemistry of drugs but does present their structural formulas and typical outline syntheses. It also discusses the biologic and clinical aspects of the drugs in somewhat simple terms.

Part 1 deals with the nature of the industry and the genesis of a new drug. Part 2 reviews selected types of drugs. Part 3, "A Tabulated Classification and Chronology of Drug Categories," presents information on the more important prototype drugs classified by their appropriate anti-infective or pharmacologic activities. The table lists 573 drugs, arranged by classification, with the following information provided: generic name, structural formula, year of discovery, nature of the discovery (isolation, first synthesis, etc.), name of originator, place of invention, and references and remarks. A glossary is appended.

About the time the book was written the pharmaceutical industry had been under attack. The authors' aim was to make a balanced presentation without taking sides. Their approach is mainly historical.

349. Smith, Dorothy L. **Medication Guide for Patient Counseling**. 2nd ed. Philadelphia, PA: Lea & Febiger, 1981. 886p. illus. index. \$29.50pa. LC 81-6053. ISBN 0-8121-0791-8.

Health professionals are frequently faced with the problem of counseling patients on the use of prescribed medication. This book was prepared to assist them. It provides instructions for using a number of generic drugs and the corresponding commercial

products available in the United States and Canada. The first edition of the work, published in 1977, was well accepted.

The bulk of the book is made up of drug monographs, each a page or two in length, containing practical information to be conveyed to patients regarding the medication. Indicated are purpose of the drug; directions for administration; correct time of administration; side effects; specific activities to avoid; significant drug, food, and alcohol interactions to be avoided; and storage requirements. Line drawings are sometimes supplied to illustrate the use of the remedies. The book also provides material on patient education and interviewing techniques. The monographs are arranged alphabetically by generic drug name, and the index provides a trade-name approach.

Patient education is a matter of growing concern. The author and the medical and pharmacy advisory boards involved are well qualified to deal with it.

350. Spinelli, Joseph S., and L. Reed Enos. **Drugs in Veterinary Practice**. St. Louis, MO: C. V. Mosby, 1978. 438p. illus. bibliog. index. LC 78-7046. ISBN 0-8016-4749-5.

One of the authors of this work holds a D.V.M. and the other a Pharm. D. degree. Their purpose is to discuss the use of drugs and biologicals in the prevention and treatment of disease. Intended primarily for students and practitioners of pharmacy and animal health technology, the hope is that the text will encourage pharmacist interest in veterinary therapeutics.

Introductory chapters include an introduction to the use of veterinary drugs, an introduction to veterinary therapeutics, and an introduction to prevention and treatment of infectious diseases. The rest of the book takes up drugs for various classes of animal diseases and treatment and prevention of them. The several appendices include controlled substances inventory requirements, biologicals—types and brand names and pharmaceuticals—types and brand names (a long section), and a glossary.

351. Strauss, Steven. **Patient Dose Instructions: A Guide for Pharmacists**. 3rd ed. Ambler, PA: IMS America (Ambler, PA 19002), 1975. 100p. illus. bibliog. index. LC 75-26063.

It is the pharmacist's professional responsibility and obligation to issue specific instructions on the use of medications so that the patient may obtain a satisfactory therapeutic response. The pharmacist must be able to communicate with the patient.

This publication lists by trade name some of the most frequently prescribed and over-the-counter pharmaceuticals with their generic names, manufacturers, and complete dose instructions. The information is intended as a guide for the pharmacist when he is advising patients. Also included are some other useful sections: suggestions on use of different dosage forms, easy-to-use reference tables, information for the diabetic, a multilingual guide for pharmacists, and instructions for the use of the AARANE inhaler.

352. Strauss, Steven. **Your Prescription and You: A Pharmacy Handbook for Consumers**. 5th ed. For Washington, PA: IMS Press, 1981. 112p. illus. bibliog. index. \$3.50pa. LC 77-26544. ISBN 0-933916-07-8.

Written in simple language, this guidebook for the consumer is intended to call attention to possible common side effects, proper storage, and correct use of prescribed and over-the-counter drugs available in the United States.

The largest section, "Patient Information," lists drugs alphabetically by trade names with the following information provided: generic name, ingredients, manufacturer, a paragraph or two about its use, effects, and other helpful comments.

Other sections provide suggestions (with illustrations) on the use of various dosage forms, 13 reference tables, information for the diabetic, and information for persons taking anticoagulant drugs.

353. Trissel, Lawrence A. **Handbook on Injectable Drugs**. 3rd ed. Bethesda, MD: American Society of Hospital Pharmacists, 1983. 538p. bibliog. index. \$40.00; \$35.00pa. ISBN 0-930530-32-2; 0-930530-33-0pa.

This book, an expanded and updated version of an earlier work, provides comprehensive coverage of 217 injectable drug products commercially available in the United States, as well as information on 57 investigational preparations. The monographs are arranged alphabetically by nonproprietary name, and trade names are included in the index. Each monograph provides the following information: formulation, concentration, stability, pH, dosage, and compatibility information, the latter primarily in tabular format.

The excellent introduction by David W. Newton, entitled "Physicochemical Determinants of Incompatibility and Instability of Drugs for Injection and Infusion," is also available as a separate reprint from the publisher. An abbreviated version of the handbook called *Pocket Guide to Injectable Drugs* (see entry 354) is also available.

This is a valuable source of information for pharmacists and other practitioners who prepare and administer intravenous drugs.

354. Trissel, Lawrence A. **Pocket Guide to Injectable Drugs**. 2nd ed. Washington, DC: American Society of Hospital Pharmacists, 1983. 176p. index. \$10.00pa.

The material presented in this brief guide has been distilled from research reports on the stability and compatibility of injectable drugs. It is an abbreviated version of the *Handbook on Injectable Drugs* (see entry 353) and is intended for use by busy nurses, pharmacists, and physicians in the hospital setting. For more detailed information and for references to the primary published sources, the *Handbook* must be used.

The material is organized in monographs, arranged alphabetically by nonproprietary drug name. Each entry includes a reference to the related *Handbook* monograph, the classification number used by *American Hospital Formulary Service Drug Information 1984* (see entry 253) for the drug, a description, trade name(s), concentration, stability, dosage, and a compatibility table. Reference to the *American Hospital Formulary Service Drug Information 1984*, as well as to the *Handbook*, will assist in resolving more complex problems.

355. Turner, Paul, and Glyn N. Volans. **The Drugs Handbook, 1983-4**. London, England: Macmillan, 1983. 168p. \$10.00pa. ISBN 0-333-34974-1.

The purpose of this small, simple book, which is frequently revised, is to provide information on various medicines (both prescription and over-the-counter) for members of the health professions. It is a guide to the mechanisms of action, therapeutic indications, and side effects of pharmaceuticals available in the United Kingdom.

The book is in two parts. The first part, the main body of the work, is a list of drugs arranged alphabetically by approved (generic) name with commonly used names in parentheses. A brief outline of information is provided, including class, action, use,

and possible side effects. The second part is a brand name index that refers to drugs listed in the first part where the information is located.

The work is not for the general public; it assumes that the reader has basic knowledge of the subject. Its reference value is limited because the information included is so brief, the number of drugs included rather small, and the brand names listed only those used in the United Kingdom.

356. USAN and the USP Dictionary of Drug Names. No. 10- . Rockville, MD: United States Pharmaceutical Convention, 1961/1971- . Annual. \$49.94pa. ISSN 0090-6816. Earlier title: *United States Adopted Names*, No. 1-9. 1961-1970.)

It has become very difficult to keep track of all the changes in the drug field. New drugs are continually replacing old ones; old drugs sometimes obtain new names; new generic names are developed; and every year there are new brand names and more chemical names. In an effort to alleviate the difficulty, in 1961 the United States Adopted Names (USAN) system began assigning a single, nationally recognized name for every new substance that showed promise as a drug. Most journals and all product advertising now require the use of USANs, and the work under review is recognized as an authoritative reference book for drug names.

The work is revised each year, and supplements have been issued between the annual editions. Each year the list is cumulative from 1961. It currently includes more than 18,500 entries. Of these entries, some are brand names, some code designations (including the National Service Center, National Cancer Institute numbers, and Chemical Abstracts Service registry numbers). Also included are international nonproprietary names published by the World Health Organization and *National Formulary* and *United States Pharmacopoeia* names.

The book contains a preface that explains the information provided, then presents the alphabetical list of names and a listing by therapeutic categories. Pronunciations, molecular formulas and weights, and graphic formulas are provided with each main entry. Also included is a list of domestic pharmaceutical firms concerned with USAN compounds.

357. USP Dispensing Information, Volume I, Drug Information for the Health Care Provider. Rockville, MD: United States Pharmacopoeial Convention, 1980- . index. Annual, with updates. \$35.95.

In 1980 the U.S. Pharmacopoeial Convention first published *USP Dispensing Information* in one volume. Recent annual editions of the work have been in two volumes, the first called *Drug Information for the Health Care Provider*, and the second, *Advice for the Patient* (see entry 358). The work is basically an ongoing review of drugs by a large number of health care professionals.

The first volume presents over 500 drug monographs intended for use by the professional health care provider. The monographs are arranged alphabetically by generic name and are indexed by other names and categories of use. Altogether over 4500 drug dosage forms are covered. Each monograph includes indications, pharmacology, precautions, side and adverse effects, patient consultation, general dosage information, and dosage forms.

This publication, with Volume II, has been well received and should play an important role in improved patient care and compliance.

An extensive review of the two volumes, with comparisons with other similar works, may be found in the *American Journal of Hospital Pharmacy*, Vol. 41, June 1984, pages 1236-1246.

358. **USP Dispensing Information, Volume II, Advice for the Patient.** Rockville, MD: United States Pharmacopeial Convention, 1980-. index. Annual, with updates. \$21.95.

A companion volume to *USP Dispensing Information, Volume I* (entry 357), this annually revised work is intended for use by the consumer. It expands and reinforces the concepts put forward in the patient consultation guidelines in Volume I. The alphabetically arranged monographs are written in lay language. Health care practitioners are allowed to reproduce a limited number of pages to be given directly to patients who receive the prescribed drug.

Experts feel that this work is probably the most complete consumer-oriented work available and that its precautions information, especially, is superior to that of other sources.

Publications such as this one are an outgrowth of the trend toward assisting the health professional in providing more complete information to patients.

An abridged edition of this volume, called *About Your Medicines*, is available in paperback for consumer use at home. It is considered very good. The U.S. Pharmacopeial Convention also publishes a newsletter called *About Your Medicines*. (see entry 707).

359. U.S. Drug Enforcement Administration. **Project Label: Alphabetical Listings by Drug Product.** Washington, DC: Government Printing Office, 1978. 725p. S/N 027-004-00025-3.

This is a compilation of label information gathered by the Drug Enforcement Administration in accordance with Title 21, Code of Federal Regulations 1308.04. Project Label is managed by the Regulatory Support Division, Office of Compliance and Regulatory Affairs, Drug Enforcement Administration to provide a listing of all manufacturers, packagers, repackagers, labelers, relabelers, or distributors of any compound, mixture, or preparation containing a controlled substance. The information given in this computer-prepared list represents only that submitted by the labelers.

The list, which is one long table, provides the following information: acquisition number (supplied by the Drug Enforcement Administration), product name (trade name), labeler name (company), dosage form, Controlled Substance Act schedule number, ingredients, potency, National Drug Code number, and status of product (marketed or discontinued).

A companion volume, an alphabetical listing by drug distributors, has also been published.

360. U.S. Food and Drug Administration. National Center for Drugs and Biologics. **Approved Prescription Drug Products with Therapeutic Equivalence Evaluations.** 4th ed. Washington, DC: Government Printing Office, 1983. 311p. \$80.00 (includes supplementary updates for an indeterminate period).

Included in this list are currently marketed prescription drug products approved on the basis of safety and effectiveness by the U.S. Food and Drug Administration. In addition, it contains therapeutic equivalence evaluations for multisource drugs. These evaluations are intended to serve as public information and advice to state health agencies in administering drug product selection laws and to promote public education in drug product selection in the hope of containing health costs.

The largest section of the book is the drug product list, which is arranged alphabetically by the nonproprietary name of the active ingredient, with individual products grouped beneath by dosage form, strength, and manufacturer. Drugs available from more than one source are indicated by codes denoting their therapeutic

equivalency or lack of equivalency. Also included in the volume are explanatory sections, a product name index, and a product name index listed by applicant.

The work is of most value to personnel in the prescription drug industry, especially those involved with the development of multisource drugs.

361. U.S. Food and Drug Administration. **National Drug Code Directory, 1982.** Prepared by the Drug Listing Branch, National Center for Drugs and Biologics. Washington, DC: Government Printing Office, 1982. 2 volumes and supplements for two years. (HHS Publication No. (FDA) 82-1077). \$90.00pa. S/N 017-012-81002-1.

This is the 7th edition of the Directory, originally established in 1969. It is a comprehensive listing of drug products and selected over-the-counter products commercially distributed in the United States.

The Directory is composed of four sections. The first and largest part (Volume 1) is an alphabetical index by product trade name. It gives name, manufacturer, drug class, active ingredients, National Drug Code number, dosage form, routes of administration, and strength. The second section, a numerical index of products by drug class, lists the groups alphabetically with the products arranged by code number underneath. The third section is a numerical index of products by National Drug Code. This code is a unique ten-digit, two-part number used to identify a trade-packaged product. The fourth section is an alphabetical index by the short name of the labeler (manufacturer). It contains names and addresses of companies whose products appear in the Directory. The eight supplements issued at intervals over a 2-year period list products that have been added, changed, or discontinued since publication of the main volumes of the work. Magnetic computer tapes of directory information are produced quarterly and may be purchased from the National Technical Information Service (NTIS).

The Directory will be more useful when the codes become better established as identifying entities.

362. **Unlisted Drugs.** Chatham, NJ: Pharmaco Medical Documentation (P.O. Box 401, Chatham, NJ 07928), 1949- . Monthly. \$260.00 per year.

Unlisted Drugs was initiated in 1949 as a cooperative endeavor of a group of pharmaceutical libraries, produced and published with the cooperation of the Pharmaceutical Division of the Special Libraries Association and participants in some foreign countries. A number of libraries in pharmaceutical industries and academic institutions have continued to participate.

The journal identifies and describes newly reported drug compounds and products that are not yet listed by name, manufacturer, and composition in the latest editions of the common drug-reference compendia. These compendia include the *American Drug Index*, *Merck Index*, *Martindale: The Extra Pharmacopoeia*, the *Rote Liste*, and others (see entries 251, 154, 105, and 343).

Each monthly issue lists about 200 products by name (or number if the drug does not yet have a name) in alphabetical or numerical sequence. Information provided about each includes name (trade and various nonproprietary names, acronyms, investigation code numbers), composition, manufacturer (with city and country if outside the United States), activity, and a bibliographic reference. Structural diagrams of newer compounds are included.

Semiannual, biennial, quinquennial, and octennial indexes are published. In addition, index volumes called *Index Guides* are published from time to time covering all back issues up to the date the volume is published. Also included in these are lists of

manufacturers and reviews of recent books on drugs. The monthly issues also include book reviews.

Unlisted Drugs is also available on cards, making it simple to keep an ever-current file. Spinoff publications include *World Pharmaceuticals Directory* (see entry 190) and *PHARMaceutical Activities Index-Directory*. The latter provides information on drug-active compounds under their pharmacologic activities.

Unlisted Drugs is a valuable work, providing information not readily available elsewhere.

363. Usdin, Earl, and Daniel H. Efron. **Psychotropic Drugs and Related Compounds**. 2nd ed. Rockville, MD: National Institute of Mental Health, 1972. (For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC 20420). 791p. illus. bibliog. index. (DHEW Publication No. (HSM) 72-9074). Stock Number 1724-0194. (A reprinted edition is available from Pergamon Press, New York, 1979. LC 79-42886. ISBN 0-08-025510-8).

The intent of this volume is to provide the research worker, clinician, or student with a listing of compounds with psychoactive properties and also information about their chemical structure, pharmacologic activity, and therapeutic classification.

The compounds are arranged by chemical structure. The following information is usually given about each compound: generic, trade, synonymous, and chemical names; structure; manufacturers and distributors; LD50 values; psychotropic action; human dose; and assay. These separate sections are included: combinations, line notation and formulas, references, index of compounds and combinations, index of Wiswesser line notation, and addresses of manufacturers.

364. **Veterinarians' Product and Therapeutic Reference**. Caldwell, NJ: Therapeutic Communications, 1972-. Irregular.

The product information presented in this guide to pharmaceuticals and biologicals is furnished by the manufacturers of the products listed. The information is printed verbatim from the package insert copy if the product had one, or from label copy if a package insert was not available. Not all of the information has been reproduced, however.

There are six sections, as follows: (1) Manufacturers' index, including a product listing; (2) Alphabetical index of brand names; (3) Therapeutic or use index; (4) Product information section; (5) Drug feed additives; and (6) Surgical supplies. In addition, there are several appendices: (A) Manufacturers of veterinary pharmaceuticals and biologicals (includes address and phone number of the manufacturers of the products described in Section 4); (B) Distributors of veterinary pharmaceuticals and biologicals; (C) Drug use guide for beef cattle and calves, dairy cattle and calves, swine, sheep and dairy goats, and poultry; (D) FDA regulations as they pertain to the veterinarian and the practice of veterinary medicine; (E) U.S. Poison Control Centers; and (F) Miscellaneous (physiologic data on all species of domestic animals, nutrient requirements of dogs, the metric system, and prescription writing information).

365. **Veterinary Pharmaceuticals and Biologicals 1982/1983**. Edited by Carl E. Aronson. 3rd ed. Edwardsville, KS: Veterinary Medicine Publishing (690 S. 4th St., Edwardsville, KS 66111), 1983. 1 volume. Separate paging. illus. (col.). index. \$28.50. LC 75-644338. ISBN 0-935-078-22-3.

This publication also has been called *The Complete Desk Reference to Veterinary Pharmaceuticals and Biologicals*. It has been compared professionally with the

Physicians' Desk Reference (see entry 335). It provides product information on about 2000 veterinary products from all major pharmaceutical manufacturers. A unique feature is a full-color, actual-size presentation of photographs of available veterinary products.

The content of the book is as follows: (1) Alphabetical list of products; (2) Alphabetical list of products by manufacturer; (3) Product identification (colored photos of tablets, etc.); (4) Cross-index of generic and proprietary names; (5) Biologicals index: small animals; (6) Drug classification index: small animals; (7) Biologicals index: large animals; (8) Drug classification; (9) Biologicals index: poultry; (10) Drug classification index: poultry; (11) Fluids/electrolytes index; (12) Diets and nutritional supplements index; (13) Parasitocides index; (14) Diagnostic aids and supplies index; (15) Product information: biologicals; (16) Product information: pharmaceuticals; (17) Product information: fluids/electrolytes; (18) Product information: diets and nutritional supplements; (19) Product information: parasitocides; and (20) Product information: diagnostic aids and supplies.

366. Wigder, H. Neil. **Wigder's Guide to Over-the-Counter Drugs: A Critical Comparison of the Effectiveness, Cost, and Safety of the Most Popular and Widely Advertised Brands.** Los Angeles, CA: J. P. Tarcher, distr. New York: St. Martin's Press, 1979. 224p. bibliog. index. \$10.00. LC 79-54749. ISBN 0-312-90489-4 (distributor); 0-87477-111-0 (publisher).

The author of this book, a physician, points out that self-medication is widespread and that nonprescription drugs have become big business. Unfortunately, consumers do not always consult professionals about these medicines, and their choice may be haphazard. Wigder provides a professional evaluation of popular brands of nonprescription drugs and rates them according to their effectiveness, cost, and safety. He bases his recommendation on well-respected reports and publications.

The products are discussed, with much of the material in tabular form, under such headings as cough medications, weight-loss drugs, laxatives, antacids, and so forth. A glossary has been included.

Each section begins with a general discussion of the category of drug being considered, and then common questions are answered. Also included are lists of "doctor's choice" drugs, drugs not recommended, and, finally, "doctor's prescription" for the ailment under discussion.

367. Wolfe, Sidney M., Christopher M. Coley, and the Health Research Group. **Pills That Don't Work: A Consumers' Guide to Over 600 Prescription Drugs That Lack Evidence of Effectiveness.** Rev. ed. New York: Farrar Strauss Giroux, 1981. 223p. bibliog. index. \$15.00; \$6.95pa. LC 81-5422. ISBN 0-374-23341-1; 0-374-51662-6pa.

Laypersons frequently praise books of this kind, but experts often think they oversimplify and/or do not tell the whole truth. The aim of the work is to provide information that will keep the consumer from exposing himself to unnecessary risks from drugs that have not been proven effective. It is presumed that health care professionals also may make use of the critical assessment of the drug literature provided. The authors believe that the U.S. Food and Drug Administration will eventually ban most, if not all, of the 607 prescription drugs listed as being ineffective.

About two thirds of the drug products included are combination products of two or more ingredients. These are considered ineffective if only one of the ingredients is ineffective. Drugs also considered ineffective are those felt to be in an ineffective dosage form (e.g., time-release capsules). Three fourths of the drugs belong to one of five

classes of drugs: cough, cold, and allergy drugs; heart pain drugs; drugs of circulatory disorders; drugs for digestive disorders; and drugs applied directly to the skin, eyes, or ears. A case study for each of these classes is presented.

The main section of the book is an alphabetical (by brand name) list of the supposedly ineffective drugs. Information provided includes manufacturer's name, use, dosage form, route of administration, ingredients, a paragraph or two of discussion, and perhaps a warning statement. The book also includes a short history of ineffective prescription drugs, appendices that provide drug sales figures, and a glossary.

368. Zimmerman, David R. **The Essential Guide to Nonprescription Drugs**. New York: Harper & Row, 1983. 886p. index. \$10.95pa. LC 82-48139. ISBN 0-06-014915-9; 0-06-091023-2pa.

An impressive volume, this work attempts to summarize the findings of a ten-year Food and Drug Administration-sponsored review of over-the-counter drugs. The material was gleaned from reports in the *Federal Register* or reports to be published there. The comments are rather extensive. In addition, the author has provided a product rating. An impressive list of review panel members assisted with the book.

The work is arranged according to the condition treated. The product listings include comments on their safety and efficacy and an indication of which brand name products contain which ingredients. More than 1000 ingredients are evaluated and more than 1000 brand name products rated. There are two indexes: a general index and an index to ratings of brand name and generic products.

The book is evidently intended primarily for the consumer or nonspecialist. The American Pharmaceutical Association's *Handbook of Nonprescription Drugs* is the standard work for the professional (see entry 289).

12 Drug Reactions and Interactions

Listed in this section are books dealing with adverse drug reactions and drug interactions. Adverse reactions can be defined as responses that are harmful and unintended and that occur at doses ordinarily used for therapy. Drug interactions occur most often when a patient is taking a large number of drugs. Foods and drugs also sometimes interact adversely. In addition, it is important to be aware that drugs may modify laboratory test results. This section includes books that deal with all of the aforementioned situations.

Fraunfelder's *Drug-Induced Ocular Side Effects and Drug Interactions* (entry 376), Girdwood's *Blood Disorders Due to Drugs and Other Agents* (entry 378), and Worthington's *Index-Handbook of Ototoxic Agents* (entry 395) deal with drug effects on specific body systems.

In addition to the titles listed in this section, there are useful periodicals such as *Clin-Alert* (entry 760) and *Reactions* (entry 924), described in part 3, chapter 20. *Excerpta Medica Section 38: Adverse Reactions Titles* (entry 37), described in part 1, chapter 2, is a valuable abstracting service.

Drugs in Litigation (entry 374) is a unique work. It provides summaries of court cases involving adverse effects of drugs.

369. **ADRIS—Adverse Drug Reactions and Interactions System.** Englewood, CO: Paul de Haen International, 1980-. Quarterly microfiche service. \$795.00 per year. Back issues available on magnetic tape.

This service provides reports of adverse drug reactions and drug interactions on both investigational and marketed drugs. Over 3000 reports are added annually to the cumulative database of more than 12,000 reports. Two indices are provided for the adverse drug reactions: one index is for drug interactions, and one index lists nonproprietary names.

Each report gives drug name, general information, patient data, design of study, adverse reactions or interactions, results, conclusion, and literature references.

370. Davies, D. M., ed. **Textbook of Adverse Drug Reactions**. 2nd ed. Oxford, England: Oxford University Press, 1981. 693p. bibliog. index. \$75.00. LC 80-41982. ISBN 0-19-261270-0.

This book, a valuable adjunct to Meyler's classic work, *Side Effects of Drugs* (see entry 386), discusses adverse drug reactions according to body systems rather than by drug groups, a feature that the prescribing physician should appreciate. A large number of experts, most of them physicians in the United Kingdom, contributed to the volume, and they have produced a learned textbook.

The foreword of the book points out that the medical profession has not been entirely guiltless in its use of drugs. Physicians have sometimes prescribed excessively and irresponsibly for a number of reasons, which are pointed out.

The reactions discussed in the text are usually divided into two groups: (1) those that are predictable and affect many people but cause few deaths, and (2) the bizarre effects that are not predictable from what is known about the pharmacologic action of the drug.

The book contains a large number of literature references, and the index is excellent. There is also an appendix that lists the drugs alphabetically with the most common untoward effects and page references to where the reaction is discussed. The book is useful to pharmacists, clinical pharmacologists, prescribing physicians, nurses, and students in those disciplines.

371. **Drug Interaction Facts**. Richard J. Mangini, ed. St. Louis, MO: Facts and Comparisons, J. B. Lippincott Co., 1984. Looseleaf. bibliog. index. \$49.00 per year with quarterly updates. ISBN 0-932686-40-0.

The text of this publication is derived from the MEDIPHOR Drug Interactions database developed at Stanford University. The editorial board and the review panel of the publication are made up of well-known individuals.

The book lists interactions of clinical significance plus some interactions that are suspected but unsubstantiated. The monographs are arranged alphabetically by the principal drug affected. The following information is included: interacting drugs, significance of the interaction, effects, mechanism, management, and a discussion that provides references to primary literature.

Because each monograph is printed on a single page of a looseleaf notebook, additions, updates, and deletions are easy to make. The discussions are good, and the index allows rapid screening for potential interactions by class of drug and by generic or trade name.

372. **Drug Interactions**. Katherine W. Carey, ed. Springhouse, PA: Springhouse Book, 1984. 136p. illus. bibliog. index. (Nursing Now Series). \$11.95. LC 84-5639. ISBN 0-916730-78-6.

This book was designed especially for nurses who feel uneasy when they administer several different drugs to a patient. The typical hospitalized patient takes 12-15 drugs during his stay, and the potential for adverse drug interactions is great. In addition to drug interactions, the book also considers any alteration in a drug's usual action in the body, regardless of the cause.

The presentation is in several parts. First the nurse's role is examined. Then the pharmacologic principles of drug action are discussed, including how and why adverse

actions occur. There is a section on high-risk patients such as the very young and the very old. The final third of the book presents charts of interactions listed under major categories such as analgesics, antineoplastics, or cardiovascular drugs. Also included are six pages of information on how drugs can alter laboratory test results and an appended chart of intravenous solution compatibilities.

The book provides an easy-to-understand and practical approach to a complex subject.

373. Drug Interactions, Including 16 Tables of Most-Used Drugs. Rev. ed. Oradell, NJ: Medical Economics, Book Division, 1976. 32p. index. \$3.25pa. ISBN 0-87489-091-8.

This frequently reissued booklet is based on material originally published in *RN Magazine* and *Pharmaceutical Précis*. The booklet contains text material on drug interactions; brief tables of weights, measures, and doses; and 16 tables of important drug interactions.

The latter tables list about 300 widely used medicines grouped by type of drug such as analgesics, antibiotics, and so forth. There are tables for alcohol and barbiturates, two of the most common sources of dangerous drug interactions. Both generic and brand names are given.

374. Drugs in Litigation: Damage Awards Involving Prescription and Nonprescription Drugs. Compiled by the staff of the publishers of *Lawyer's Medical Cyclopedia*; compilation editors: Richard M. Patterson, Robert E. Robinson; contributors and consultants: H. Newcomb Morse, Charles J. Frankel, and Monte G. Crumley. 2nd ed. Indianapolis, IN: Allen Smith, 1982. 540p. bibliog. index. \$35.00pa. LC 82-159174. ISBN 0-87473-153-4.

The first edition of this work appeared in 1976 under the title *Malpractice and Product Liability Involving Drugs*. It was written because of the startling increase in the number of malpractice product liability actions against physicians, hospitals, pharmacists, and drug manufacturers. The problem of adverse drug reactions was and still is serious. The compilers and contributors feel that legal research into drug liability in the past has been cumbersome, and they hope their book will help. They have provided summaries of appellate drug decisions cross-indexed under generic and trade names and also have included trial court decisions and jury verdicts plus settlement amounts in some instances. References to pertinent medical articles and treatises are included. Recommended are some common drug compendia such as the *Physicians' Desk Reference* (entry 335) and *AMA Drug Evaluations* (entry 247). The volume, however, is intended to be a source of drug litigation history and not a source of drug information.

It was necessary to limit the size of the volume, so cases that only involved drugs indirectly were not included. In addition, most cases against pharmacists for dispensing the wrong drug were not included because these disputes do not question quality, dosages, or judgment in prescribing or dispensing a drug.

The main section, "Drugs and Cases," lists the drugs by generic name with cross-references from trade names. The case summaries follow each listing. The book also provides a list of selected references, a table of cases, and an index of drug names.

375. Evaluations of Drug Interactions. Editor: Arthur F. Shinn; associate editors: Mark J. Hogan and Steven K. Hebel. 3rd ed. St. Louis, MO: C. V. Mosby, 1985. 1 volume. Looseleaf. bibliog. index. \$64.95. LC 84-27189. ISBN 0-9016-4046-6.

The first two editions of this reference work were published by the American Pharmaceutical Association, and this edition has their endorsement.

In the past decade or so, many publications have appeared regarding drug interactions. Most of them list interactions that have been reported in the literature. This one is a bit different; it attempts to provide evaluations or a consensus among experts about specific interactions based on the available technical literature. The book was prepared by a large number of health care professionals from various disciplines for use by all health care professionals.

The introductory section presents an overview of basic principles of drug interactions. Then the individual drug monographs with evaluations are presented arranged under 18 pharmacologic classes of drugs such as anticoagulant drug interactions, antineoplastic drug interactions, and so on. The following information is usually provided about each drug: a summary, related drugs, mechanism, recommendations, and several literature references. Significance of the interactions has been assigned a code number from one to four based on three major factors: (1) potential harm to the patient; (2) frequency and predictability of occurrence; and (3) degree and quality of documentation.

The book provides substantial assistance to those interested in drug therapy because it attempts to make order out of the existing reports in the literature, which are sometimes fragmentary and incomplete.

There are to be six updates to the volume each year.

376. Fraunfelder, F. T. **Drug-Induced Ocular Side Effects and Drug Interactions**. Associate editor: S. Martha Meyer. 2nd ed. Philadelphia, PA: Lea & Febiger, 1982. 544p. bibliog. index. \$30.00. LC 82-146. ISBN 0-8121-0850-7.

There are no drugs that do not occasionally produce undesirable side effects. There is a growing concern with this problem, and more reports of adverse reactions are appearing in the literature. This work has become a classic since the first edition appeared in 1976. It is concerned with ocular side effects that are induced by medication and with the possible interactions of drugs prescribed by ophthalmologists with those the patient may already be taking. The book organizes reports from the literature into a concise compilation useful for reference. The number of drugs included has grown significantly since the first edition was published.

The material is arranged in chapters by the general category of the primary action of the drugs, for example, anti-infectives, gastrointestinal agents, oncolytic agents, and so forth. Under each category the class of drug is given (e.g., "antibiotic"), then the various names of the drugs with primary uses, ocular side effects, clinical significance, interaction with other drugs, and literature references are provided. An index of side effects and an index of drug names have been included.

The book is of most value to the ophthalmologist, although other physicians and pharmacists should be interested in it.

377. Garb, Solomon. **Undesirable Drug Interactions, 1974-1975**. Rev. ed. New York: Springer Publishing, 1973. 578p. bibliog. \$13.95; \$9.50pa. LC 70-85226. ISBN 0-8261-1183-1; 0-8261-1184-Xpa.

The first edition of this work, called *Clinical Guide to Undesirable Drug Interactions and Interferences*, was published in 1971 and was one of the first books that dealt with drug interactions.

The book is largely taken up with the presentation of a table that presents two names (which may be drugs, foods, or diagnostic tests) with code letters that designate

the undesirable interaction that might result if and when they are used together. Also given with each entry are numbers that refer to the numerous literature references included (1507 of them) and from which the author obtained the information presented. A second, much shorter, table is also included that lists drugs under certain pharmacologic groups. This helps the user who notes that a particular drug is said to interact with a certain group of drugs find what specific drugs are included in this group.

Attention to the problem of drug interactions has increased markedly since this book was published.

378. Girdwood, Ronald H., ed. **Blood Disorders Due to Drugs and Other Agents.** Amsterdam, The Netherlands: Excerpta Medica, 1974. 281p. illus. bibliog. index. \$25.50. LC 73-165441. ISBN 90-219-2048-4.

Presented in this volume are several scholarly chapters, each by a different specialist, on various aspects of blood disorders. The main intention is to deal with blood disorders that may follow the administration of drugs or be caused by certain other agents.

Chapter titles are: (1) Doctors and disorders of the blood; a general consideration of errors and unexpected reactions; (2) Immune drug-induced haemolytic anaemias; (3) Effects of drugs and other agents in erythrocyte enzyme deficiencies and haemoglobinopathies; (4) Drug-induced megaloblastic anaemia; (5) Aplastic anaemia (panmyelopathy); (6) Chloramphenicol toxicity; (7) Benzene-induced hypoplastic anaemias and leukaemias; (8) Drug-induced agranulocytosis; (9) Drug-induced thrombocytopenia; (10) Drug-induced thrombocytopathy; (11) Anticoagulant-induced haemorrhages; and (12) Haematological aspects of radiation exposure.

Drug names are included in the subject index.

379. Griffin, J. P., and P. F. D'Arcy. **A Manual of Adverse Drug Interactions.** 3rd ed. Bristol, England: John Wright and Sons, 1984. 419p. bibliog. index. \$56.00. LC 84-50393. ISBN 07236-0726-5.

The object of this book is to present in accessible and understandable form the major drug interactions that are likely to be encountered in therapeutics and to draw attention to some theoretical interactions that could be serious. The intended audience is the prescribing physician and the pharmacist. In preparing the second edition of the work, the authors took into account the trend toward the increasing numbers of medicinal products that are used for self-medication and also the belief by the general public that herbal remedies are safe because they are "natural products." Because of the latter, a special section was added on interactions with herbal products. In this third edition, the authors point out that patients are becoming more litigation conscious and that more claims for drug-induced injury due to interactions are being initiated. Physicians are advised not to use two drugs if one will do.

The book is in two parts. Part 1 takes up basic mechanisms of drug interactions, covering interactions in vitro, interactions in the intestine, interactions and drug-metabolizing enzymes, interactions of plasma and receptor-binding sites, interactions in excretory mechanisms, and other factors in drug interactions. Part 2, which presents drug interaction tables, makes up most of the book. Drug interactions with 26 different drugs or types of drug are listed. The interaction in each case is described and its management outlined.

380. Hansten, Philip D. **Drug Interactions: Clinical Significance of Drug-Drug Interactions**. 5th ed. Philadelphia, PA: Lea & Febiger, 1985. 460p. bibliog. index. \$21.00pa. LC 84-19397. ISBN 0-8121-0944-9.

Often considered the best available text on drug interactions, this work has been used through each edition by a diverse group of health professionals, including pharmacists, nurses, dentists, physicians, and others. This edition includes about 200 newly recorded drug interactions. Unlike the earlier editions, this one does not include a section on the effects of drugs on clinical laboratory results. Because of the steadily increasing volume of information available, it was decided to publish that material separately.

The chapter headings are: (1) Antiarrhythmic drug interactions; (2) Oral anticoagulant drug interactions; (3) Anticonvulsant (general) interactions; (4) Antidiabetic drug interactions; (5) Antihypertensive drug interactions; (6) Anti-infective drug interactions; (7) Antineoplastic drug interactions; (8) Digitalis drug interactions; (9) Diuretic drug interactions; (10) Ethanol interactions; (11) Hormone interactions; (12) MAO inhibitor interactions; (13) Phenothiazine interactions; (14) Salicylate interactions; (15) Tricyclic antidepressant interactions; and (16) Miscellaneous interactions.

The drug-drug interactions discussed are arranged as much as possible by drug or drug class, but interactions for a given drug may appear in several locations in the work. The index should be used to ensure locating the desired interaction. The interactions have been classified or rated as to significance. Bold type indicates major clinical significance, italic type moderate significance, and Roman type minor significance. The three typefaces are used in both the text and the index. A great many literature references have been provided.

381. Harkness, Richard. **Drug Interactions Handbook**. Englewood Cliffs, NJ: Prentice-Hall, 1984. 341p. index. \$9.95pa. LC 83-21167. ISBN 0-13-220947-0.

Drug interactions are a potential problem for those who take any kind of medication. Although the percentage of serious problems that arise is small, interactions often increase or decrease the therapeutic effects of a medication. Harkness, a practicing pharmacist, takes the view that the patient should be aware of the possibility of this kind of problem, and the purpose of his book is to provide reliable, easy-to-use information on adverse drug interactions. Although intended especially for the layperson, medical practitioners also may find it helpful.

The material is arranged in chapters that cover drug interactions for the medications used to treat a particular kind of ailment, for example, drug interactions in the treatment of heart disorders. Each chapter is in three sections: (1) Discussion of the ailment or condition; (2) Brand name section; and (3) Drug interaction section. Significant interactions are marked by an asterisk. The index may be consulted when the name of a particular drug is known. There are short appendices on food-drug interactions, alcohol-drug interactions, vitamin-drug interactions, and vitamin-vitamin interactions.

A number of recent books on drug interactions are available for health care professionals. This book is especially significant because it is suitable for the layperson.

382. Hartshorn, Edward A. **Handbook of Drug Interactions**. 3rd ed. Hamilton, IL: Drug Intelligence Publications, 1976. 242p. illus. bibliog. index. \$5.85pa. LC 76-27057. ISBN 0-914768-23-9.

This is a compilation of articles on drug interactions that appeared earlier in the journal *Drug Intelligence and Clinical Pharmacy* (see entry 785), except for the last chapter, which is a collection of abstracts from the literature.

The reprinted articles treat the following topics: general considerations of drug interactions; physiologic states altering the response to drugs; how drugs interact; and classes of drugs and their interactions. In addition, the following types of drugs are treated separately: antihistamines, antibiotics, other anti-infective agents, antineoplastic agents, parasympathomimetic agents, parasympatholytic agents; sympathomimetic agents, sympatholytic agents, skeletal muscle relaxants, blood-forming and coagulating agents, oral coumarin anticoagulants, cardiac drugs, antihyperlipemic agents, hypotensive agents and vasodilating drugs, and various central nervous system drugs.

An update to this handbook was published in 1982.

383. Lerman, Fred, and Robert T. Weibert. **Drug Interactions Index**. Oradell, NJ: Medical Economics, Book Division, 1982. 290p. bibliog. \$19.95pa. LC 82-8232. ISBN 0-87489-266-X.

This compact reference guide, through a unique numbering system, leads the user to the descriptions of more than 300 harmful drug-drug or drug-food interactions. In addition, it provides trade/generic and generic/trade name conversions, and assists in the handling of drug classes and combination products.

The book is in several sections: (1) Name index (used to find the code number of the drug); (2) Number index (used to find the interaction number(s) for the drug of interest); (3) Interactions, drug-drug and drug-food (the main section of monographs, arranged by code number); and (4) Appendix: generic names by number (converts drug code numbers into generic names).

The monographs in section 3 are concise, presenting essential clinical features and implications of the reactions, plus suggestions for treating and minimizing undesirable effects. The code numbering system allows the comments about the interactions of a number of similar products to be grouped together.

384. Martin, Eric W. **Hazards of Medication: A Manual of Drug Interactions, Contraindications, and Adverse Reactions with Other Prescribing and Drug Information**. 2nd ed. Philadelphia, PA: J. B. Lippincott, 1978. 686p. bibliog. index. \$49.00. LC 14265. ISBN 0-397-50389-X.

When the first edition of this book appeared, there were few works that covered this subject. Since then their number has multiplied.

Martin begins by saying that every medication is potentially hazardous. Therefore, safe and effective drug therapy demands knowledge of every drug being prescribed, thorough patient analysis, and adequate patient education. If these essentials are observed, most drug-induced disease and disease-related malpractice litigation can be avoided. The objectives of the book are: (1) to alert physicians and other health professionals to the pitfalls facing both patient and prescriber whenever a prescription is written; (2) to present an analysis of the potential hazards inherent in each facet of the entire drug distribution system to the patient; and (3) to provide for ready reference detailed tabulations of interferences in clinical laboratory testing, compatibilities and incompatibilities of intravenous solution additives, adverse drug reactions, drug interactions, and other precautionary information.

The first part of the book presents text material and tables covering the matters outlined above. The last section of the book is a table of drug interactions that is about

225 pages in length. It is an alphabetical, cross-indexed arrangement of generic and trade names and interactants. Included is a selected bibliography of 2068 references in addition to references at the end of the chapters.

The chapters of the work dealing with drug interactions and the table of drug interactions were made available in a separate publication called *Drug Interactions Index, 1978/79*.

385. Meyler, L., and H. M. Peck, eds. **Drug-Induced Diseases**. Amsterdam, The Netherlands: Excerpta Medica, 1961-1973. 4 volumes. illus. bibliog. index. \$126.50 (Volume 4). ISBN 90-219-2035-2 (Volume 4).

Volume 1 was published by Charles C. Thomas, Assen, The Netherlands. Volumes 1 and 2 are the proceedings of the first and second Symposium on Drug-Induced Diseases organized by the Boerhaave Courses for Post-Graduate Medical Education, State University of Leyden. Volume 2 is number 85 of the International Congress Series, Excerpta Medica Foundation.

These volumes present highly technical material on drug-induced diseases, providing many literature references. The papers, each by a different author, emphasize the side effects of drugs and make little reference to the beneficial effects. It is assumed that physicians will apply the risk-to-benefit ratio in prescribing them.

Volume 4, the only volume now in print, presents the following papers: (1) Diagnostic problems in drug-induced diseases; (2) The monitoring of adverse reactions to drugs and the discipline of therapeutic auditing; (3) The relationship of genetic factors to drug reactions; (4) The relationship of chromosome aberrations to drugs; (5) The clinical aspects of the relationship of drugs to malformations; (6) Carcinogenic hazards due to drugs; (7) The mechanisms of adverse drug reactions; (8) Antagonism and potentiation of drug action and the mechanism of microsomal enzyme induction; (9) Masking effects of drugs; (10) Hypersensitivity to drugs; (11) The therapeutic use of placebos; (12) Liver diseases due to drugs; (13) Renal diseases due to drugs; (14) Drug-induced diseases as seen by a haematologist; (15) Diseases of the heart and vascular system due to drugs; (16) Adverse cutaneous reactions to drugs; (17) Drug-induced diseases of the gastrointestinal tract; (18) Drug-induced diseases of the bones, joints, and connective tissue; (19) Endocrine and metabolic effects of drugs; (20) Diseases of the respiratory tract due to drugs; (21) Drug-induced ophthalmological changes; (22) Ototoxic changes due to drugs; (23) Changes in the voice due to drugs; (24) Disorders of the nervous system due to drugs; (25) Psychiatric syndromes due to drugs; (26) Drug dependence caused by medical treatment; (27) Unwanted effects of drugs in the neonate, premature and young child; and (28) Unwanted drug effects in the elderly.

Some of these topics were considered in earlier volumes, and earlier volumes covered some topics not considered in Volume 4.

386. **Meyler's Side Effects of Drugs: An Encyclopedia of Adverse Reactions and Interactions**. Edited by M. N. G. Dukes. 10th ed. Amsterdam, The Netherlands: Elsevier Science Publishers, 1984. 966p. bibliog. index. \$111.50. ISBN 0-444-903232.

The first edition of this work appeared in 1957. It has provided a comprehensive, reliable guide to what is known about side effects and interactions of drugs. Recent editions are said to be based on information screened from more than 3500 medical and pharmaceutical journals, making use of the Excerpta Medica database.

The material is presented in 51 chapters divided by type of drugs. Each chapter presents one or more "Side Effects Monographs," which may discuss a group of related drugs or the best known one of the group. Then shorter accounts of the individual drugs

are presented. In a few chapters, particularly those that discuss a large number of drugs, the material is given in tables. The monographs are structured as follows: the adverse reaction pattern is summarized; effects on organs and systems are discussed; risk situations are outlined; effects on organs and systems are discussed; risk situations are outlined; and second generation effects, overdose, interactions, and interference with diagnostic routines are considered.

The earlier editions of *Meyler* contained more literature references; only selected references appear in recent editions. Cross-references are sometimes made to the earlier volumes where other sources are listed. There are indexes by drug name and by side effects.

Meyler can be used as an independent general reference work or as a companion volume to the series *Side Effects of Drugs Annual* (see entry 80), which provides a year-by-year analysis of new developments. Cross-references are made between *Meyler* and the annuals.

387. Moser, Robert H., ed. **Diseases of Medical Progress: A Study of Iatrogenic Disease. A Contemporary Analysis of Illness Produced by Drugs and Other Therapeutic Procedures.** With a Foreword by F. Denette Adams. 3rd ed. Springfield, IL: Charles C. Thomas, 1969. 925p. bibliog. index. \$97.50. LC 68-18298. ISBN 0-398-01356-X.

The author says the purpose of this work is to foster an attitude of rational caution and to stimulate a spirit of critical evaluation where each physician will ask himself, "Does the possible benefit of this drug outweigh its potential hazard?" The book is intended as a ready reference for the physician. It is reasonably simple and readable. It consists of text material and extensive literature references.

The following chapters are presented: (1) Antibiotic-induced diseases; (2) Cardiovascular diseases; (3) Congenital diseases; (4) Dermatologic diseases; (5) Gastrointestinal diseases; (6) Hematologic diseases; (7) Hormone-induced diseases; (8) Hypersensitivity and connective tissue disorders; (9) Metabolic diseases; (10) Neurologic and psychiatric diseases; (11) Pulmonary diseases; (12) Radiation-induced diseases; (13) Renal diseases; (14) Surgically induced diseases; (15) Diseases of diagnostic procedures; and (16) Psychosemantics (on speaking to patients).

There is a drug index of trade names and a separate index of generic names, but they do not list page numbers for reference. A general index, however, lists drug names and diseases.

388. Pharm Analysis Associates, Inc. **Guide to Significant Drug Interactions.** Edited by John F. Thompson. Arlington, VA: American Society of Consultant Pharmacists (2300 9th St. South, Arlington, VA 22204), 1978. 1 volume. Looseleaf. bibliog. index. \$49.50.

The material in this looseleaf notebook covers drug-drug, drug-laboratory test, and drug-food interactions. The main section presents monographs on interactions, providing the following information: pharmacology, onset/duration, significance, comments and recommendations, and literature references. The drug-laboratory test interactions are listed in a separate section in tabular format.

389. Roe, Daphne A. **Handbook: Interactions of Selected Drugs and Nutrients in Patients.** 3rd ed. Chicago, IL: Publications Dept., American Dietetic Association, 1982. 142p. bibliog. index. LC 82-11500. ISBN 0-88091-004-6.

This is a revision of a 1978 work: *Handbook, Interactions of Selected Drugs with Nutritional Status in Man* by Donna Crawford March. It is intended as a guide to potential drug-nutrient interactions that may lead to nutrient depletion. It includes indications of prevalence, drug dosage-time relationship, associated predisposing factors, possible mechanisms of interaction, and recommendations for prevention and treatment in some cases. The book is addressed mainly to dietitians and physicians but is also of interest to pharmacists.

The material is arranged by the widely used pharmacologic-therapeutic classification system of the *American Hospital Formulary Service* (see entry 253). The drugs are listed by generic name, with the information provided on effects, mechanism, and significance. References are provided (by code) to works listed in the bibliography.

Appendices include a list of nutrients showing known nutrient-drug interactions, list of drugs whose absorption is affected by food, food-related factors influencing drug metabolism and efficiency, dietary substances affecting nutrient and drug absorption, and prohibited foods and beverages by drug group and specifications.

390. Rosenberg, Jack M., and Marilyn Rosenberg-Rosen. **Prescriber's Guide to Drug Interactions**. 2nd ed. Oradell, NJ: Medical Economics, Book Division, 1984. 410p. index. \$19.95pa. LC 83-13117. ISBN 0-87489-340-2.

A revision of a popular work published in 1978, this edition is more than 100 pages longer than the first. New drugs have been added and the index enlarged to include virtually all the brand names in the United States and Canada.

The material is divided into 25 chapters by drug classification, for example, antacids, antineoplastics, and so on. Each chapter contains a general discussion of the drug category plus tables listing the most important interactions involving the drugs in that category. The most critical interactions appear in boldface type.

391. Stockley, Ivan H. **Drug Interactions: A Source Book of Adverse Interactions, Their Mechanisms, Clinical Importance, and Management**. Oxford, England: Blackwell Scientific Publications; distr. Blackwell Mosby Book Distributors, St. Louis, MO, 1981. 495p. bibliog. index. \$29.50pa. ISBN 0-632-008431.

The author of this work says his aim is to present what is known about drug interactions to the practicing doctor, pharmacist, nurse, or anyone else who has neither the time nor the facilities to carry out detailed literature searches. Approximately 600 drug-drug and drug-food interactions are considered. In addition, Stockley has attempted to answer associated questions such as: Is it a genuine, reported interaction or is it still only theoretical? Has it been described many times or only once? Is the interaction, when it occurs, serious or not? Are all patients affected or only a few? Is it best to avoid the concurrent use of the drugs altogether, or can the interaction be accommodated in some way? And what alternative drugs can be used that do not interact?

The material is organized into a series of individual drug-drug or drug-food synopses and categorized into 20 chapters (e.g., anticoagulant drug interactions). The first chapter of the book is an outline survey of some basic drug interaction mechanisms. The synopsis chapters are assembled according to the drug whose activity is changed. Because the same drug may also be the affecting or interaction agent, it is necessary to use the index to ensure that the whole range of interactions can be identified.

Each synopsis provides the following information: summary, description of the interaction, mechanism (if known), importance and management, and a number of

literature references. A few chapters include a short pharmacologic introduction for readers whose memories may need refreshing. The bibliographic section will be of value to those who wish to study the original literature in depth.

392. Swidler, Gerald. **Handbook of Drug Interactions**. New York: Wiley-Interscience, 1971. 384p. bibliog. index. \$29.50. LC 73-155775. ISBN 0-471-8372-2.

Drug interaction is defined as the phenomenon that may occur when the effects of one drug are modified by the prior or concurrent administration of another drug. In addition, interactions other than those that are drug with drug may occur, for instance, drug with food, drug with environmental contaminants, or drug interactions that interfere with laboratory test results. The subject of drug interaction has attracted a great deal of attention recently, and a number of books and articles on the topic have appeared almost simultaneously.

This handbook is a compilation of the effects that drugs have on one another and on the patient when two or more drugs are active in the patient's system. The author does not claim to have been comprehensive in the inclusion of the drugs. The work is probably most useful to physicians and pharmacists, but nurses and clinical pharmacologists also will find it of interest. However, mechanisms for all drug interactions are not included; this information is omitted when the mechanism is unusually complicated, unknown, or obvious. The material was compiled from information furnished to the medical profession by pharmaceutical manufacturers. The arrangement is alphabetical by the name of the drug, usually the trade name. There are also cross-references from other names in the text and two indexes, one general that includes names and types of drugs and the other by generic name.

393. U.S. Food and Drug Administration. **National Adverse Drug Reaction Directory. "COSTART" (Coding Symbols for Thesaurus of Adverse Reaction Terms)**. Washington, DC: Government Printing Office, 1970. 1 volume. (Various pagings). index.

The primary purpose of COSTART is to provide a basis for vocabulary control of reports of adverse reactions associated with drugs and received from a variety of sources and many different reporters. Such control is a necessary first step in the effective use of the computer to store and retrieve data. A predecessor to COSTART was called DART (*Dictionary of Adverse Reaction Terms*).

The volume is made up of (1) A glossary; (2) General instructions for use of COSTART; (3) Index A, which is made up of three parts: hierarchical body system classification, special search categories, and special search categories (fetal-neonatal disorders); (4) Index B, coding symbols with associated obligatory search categories; (5) Index C, coding symbols by body system orientation; and (6) Index D, general inventory of adverse reaction terms with reference to appropriate coding symbols.

394. Winick, Myron, ed. **Nutrition and Drugs**. New York: Wiley-Interscience, 1983. 206p. bibliog. index. (Current Concepts in Nutrition, Volume 12). \$53.00. ISBN 0-471-89210-6.

Interest has been expressed recently in the role that pharmacists can play in improving the standard of nutrition in many countries. It also has been recommended that dietetics be introduced into the pharmacy curricula and that awareness of interactions between foods and drugs become part of the pharmacist's expertise.

This book covers a diverse group of topics on the subject. It presents 13 chapters by noted contributors as follows: (1) Drug-vitamin B₆ interaction; (2) Effects of drugs on

cellular transport of nutrients; (3) Vitamin D metabolism and metabolic bone disease; (4) Alcohol, protein nutrition and liver injury; (5) Drugs and vitamin B₁₂ and folate metabolism; (6) Drugs in the food supply; (7) Lipid-lowering drugs and low-fat diets; (8) Effect of diet and sulfonylurea drugs on insulin resistance and insulin-receptor function; (9) Drugs and nutrient absorption; (10) Appetite regulation by drugs and endogenous substances; (11) Drugs and diet therapy; (12) Diuretics and salt restriction in blood pressure control; and (13) Vitamin A analogs in skin disease.

This work is especially valuable because there are few books available on this subject.

395. Worthington, E. Louisa, Lois F. Lunin, Miriam Heath, and Francis I. Catlin. **Index-Handbook of Ototoxic Agents, 1966-1971**. Baltimore, MD: Johns Hopkins University Press, 1973. 647p. bibliog. index. \$22.50. LC 72-12349. ISBN 0-8018-1438-3.

A number of drugs are known to cause damage to the ear. One of the purposes of this index-handbook, with its analysis of the literature on ototoxic agents, is to alert physicians to the potential dangers of new drugs, as well as the hazards of known drugs under conditions that increase the risk of ototoxicity. Another purpose of the book is to provide an overview of the recent research on the subject for the research scientist.

The book is in several sections, each printed on different-colored paper. The two main sections are mini-abstracts and citations. In addition, there are two indexes, one to the mini-abstracts by page number, and the other by author to document number. There are also appendices that include a key to journal abbreviations used and lists that identify trade names when generic name is known and vice versa. In addition, there is a section on effects of ototoxic agents and a section on species affected by ototoxic agents. These sections are made up of briefer abstracts.

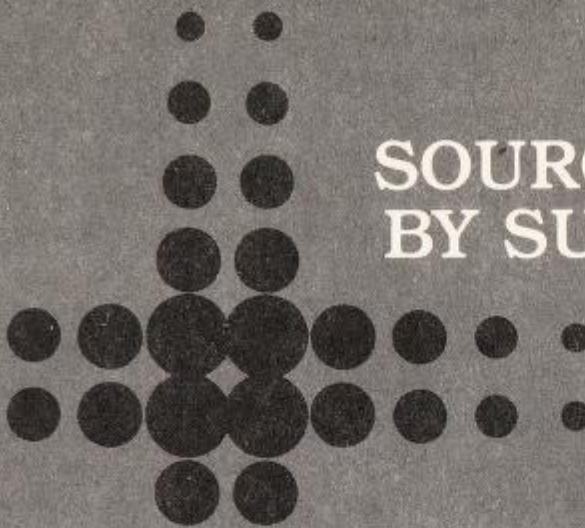
The main mini-abstract section is the largest. These abstracts contain analyzed data for 732 papers arranged under classes of drugs (and a few other substances) and numbered. The citation section contains the bibliographic data for the 732 papers discussed in the mini-abstract section. Many codes and abbreviations are used throughout.

Fortunately, a section is included explaining how to use the book. It is unconventional in arrangement and format and requires some study to understand.

396. Young, D. S., L. C. Pestaner, and Val Gibberman. **Effects of Drugs on Clinical Laboratory Tests**. Winston-Salem, NC: American Association of Clinical Chemists, 1975. 432p. bibliog. (*Clinical Chemistry*, Vol. 21, No. 5, April 1975).

This is a supplementary issue to the journal *Clinical Chemistry*, which is devoted to the possible effects of drugs on laboratory tests. The information was compiled from the published literature. In some instances the authors have indicated the probability of a modification occurring.

The work contains these sections: (1) List of search terms; (2) Proprietary/generic name and search term directory; (3) Abbreviation and short-form directory; (4) Alphabetic listing by drug name; (5) Alphabetic listing by laboratory test; and (6) References.



PART II

SOURCE MATERIAL BY SUBJECT AREA

13 Pharmacy Practice

Listed here are texts and other works of interest in the area of pharmacy practice. Most aspects of the subject are covered, with an emphasis on clinical pharmacy. Because of the increase in interest in this aspect of pharmacy practice in the past decade or so, there are a number of titles dealing with hospital or other institutional practice.

Other subjects covered include the role of the pharmacist in patient care, therapeutics, law and ethics, pharmaceutical calculations, computer use, drug information services, social and economic aspects of the field, management, marketing, communication, and consulting.

Several of the books listed, especially those on dosage calculations are intended primarily for nurses but are also useful to the pharmacist. A few of the titles are suitable for physicians.

397. American Society of Hospital Pharmacists. **Basic Skills in Clinical Pharmacy Practice**. Edited by Max D. Ray. Carrboro, NC: Health Science Consortium, 1983. 359p. bibliog. \$20.00pa. LC 83-10644. ISBN 0-938938-10-X.

This is a self-study how-to text for students, midcareer practitioners, pharmacists from small hospitals, and anyone who has a desire to learn more about clinical pharmacy. Included in the price of the book is a copy of the Post-Test Answer Booklet, which may be returned to the American Society of Hospital Pharmacists for grading and a Continuing Education Certificate. In addition to the continuing education component, the book serves well as a handbook for practitioners.

The material is presented in 11 units, each written by a pharmacy practitioner who is an expert in that specific area of clinical practice. Topics presented are: (1) Functional elements of clinical pharmacy practice; (2) How to get started—planning clinical pharmacy service; (3) Providing drug information to health professionals; (4) How to

conduct a patient medication history interview; (5) Monitoring drug therapy; (6) Teaching and counseling patients about drugs; (7) How to get involved in medical rounds; (8) Adverse drug reactions: detection, assessment, reporting, and prevention; (9) Participating in drug use review; (10) Pharmacist participation in the delivery of nutritional support; and (11) The pharmacist's involvement on a cardiopulmonary resuscitation team. Learning objectives are stated at the beginning of each unit and review questions are included throughout. Post tests are provided after each unit, and suggested readings are listed at the beginning of each unit to assist in background preparation.

398. American Society of Hospital Pharmacists. **Practice Standards of the American Society of Hospital Pharmacists, 1984-85.** Bethesda, MD: American Society of Hospital Pharmacists, 1984. 121p. bibliog. \$5.00pa.

This publication provides a point of reference for pharmacists' use in evaluating institutional programs and services. Reproduced in it are three kinds of documents: (1) ASHP Statements, which declare and explain basic philosophy or principles; they must be approved by the organization's board of directors and house of delegates; (2) ASHP Guidelines, which give general advice on the implementation of pharmacy practice programs; they must be approved by the board of directors; and (3) ASHP Technical Assistance Bulletins, which contain advice on pharmacy programs and functions as developed by an ASHP staff division in consultation with experts; they must be approved by the board of directors. The documents are reviewed and revised periodically as necessary.

399. Bush, Patricia J., ed. **The Pharmacist Role in Disease Prevention and Health Promotion.** Bethesda, MD: American Society of Hospital Pharmacists Research and Education Foundation, 1983. 171p. bibliog. \$15.00pa.

Like the medical profession, the pharmacy profession is now focusing on the patient. Historically the emphasis of pharmacy education was on compounding, dispensing, and distributing tasks. The overall purpose of this collection of papers is to identify and describe pharmacists' roles, which reflect the public health orientation of disease prevention and health promotion. The papers are intended to motivate the development of these roles and provide guidance for pharmacy educators in curriculum development.

The following papers are presented: (1) Introduction to the pharmacist role in disease prevention and health promotion; (2) The pharmacist role in individual preventive health care; (3) The pharmacist role in community preventive health care; (4) The pharmacist role in primary care; (5) The pharmacist role in referral; (6) The pharmacist role in health education; (7) The pharmacist role in drug information; (8) The pharmacist role in toxicology; (9) The pharmacist role in health planning and policy; (10) Documentation of pharmacist activities in disease prevention and health promotion; (11) Competencies for the pharmacist role in disease prevention and health promotion; and (12) Summary.

400. Cornell, Joseph A. **Computers in Hospital Pharmacy Management: Fundamentals and Applications.** Rockville, MD: Aspen Systems Corporation, 1983. 216p. illus. index. \$24.50. LC 82-24381. ISBN 0-89443-673-2.

Cornell says his purpose is "to take practicing hospital pharmacists from their current level of computer literacy, whatever it may be, to a level of systems knowledge at which they will be significantly better prepared to participate in a systems

development effort." The book's title is misleading because most of the subject matter is devoted to explaining how computers work. It is not a book about computers in hospital pharmacy management. However, it does quite well at explaining computer technical fundamentals and applications, and it is a useful introduction to computers. Systems design is covered and a hypothetical pharmacy computer system is presented.

The book is divided into five chapters and seven appendices, the latter making up about one third of the text. Chapter titles are as follows: (1) How computers work: the binary number system; (2) Programming and language; (3) Computer components: input, output, and storage devices; (4) Systems development: a cogent approach; and (5) A hypothetical pharmacy system. The appendices include the following: (1) Glossary; (2) ASCII and EBCDIC codes; (3) Sample BASIC program; (4) Sample Pascal program; (5) Sample proposal to conduct systems analysis; (6) Systems analyses completion report; and (7) A quick review of number systems.

Although the author is a pharmacist, his approach is more that of a computer scientist than a hospital pharmacy manager.

401. Dale, J. R., and G. E. Applebe. **Pharmacy Law and Ethics**. 3rd ed. London, England: The Pharmaceutical Press, 1983. 604p. index. \$10.50pa. ISBN 0-85369-168-1.

This well-known reference text presents statutes that affect the practice of pharmacy in Great Britain along with an account of the way pharmacy has developed and maintained its standards of professional conduct. Because English law is the origin of much of U.S. law and British patterns of practice resemble ours, the book is of interest to American readers.

The book covers such topics as the Medicines Act, good dispensing practices, the British National Health Service, professional conduct, prescribed dangerous substances, and legal decisions affecting pharmacy.

In the United States, the book has more value as a reference work than as a textbook.

402. Davis, Neil M., and Michael R. Cohen. **Medication Errors: Causes and Prevention**. With contributions by Ruth Budd Jacobsen and Charles J. Milazzo. Philadelphia, PA: George F. Stickley, 1981. 279p. illus. bibliog. index. \$15.95. ISBN 0-89313-051-6.

The purpose of this book is said to be to document the problem of medication error, discuss the reasons for these errors, and suggest methods to prevent them from occurring. Although the health care system has many checks and balances in it to prevent errors from reaching the patient, they sometimes do. This book deals with the contributions of the physician, nurse, pharmacist, and their assistants and students in causing and preventing errors. In addition, the roles of the patient and the pharmaceutical industry are also considered.

The book is divided into two sections of about equal size, chapters of text material and appendices. Chapter titles are: (1) General information; (2) Published medication error studies; (3) Role of supervision in preventing errors; (4) Physicians' orders as a source of medication errors; (5) Need for proper expression of drug names, strengths, etc.; (6) Dangerous abbreviations; (7) Drug distribution and administration systems failure; (8) Reading labels; (9) Errors associated with drug dispensing; (10) Errors associated with a lack of knowledge about drugs; (11) Patient identification; (12) Errors associated with medication administration; (13) The patient's contribution to medication errors; (14) Errors related to cancer chemotherapy; (15) The manufacturer's

contribution to medication errors; (16) Mathematical mistakes in calculating doses; (17) Risk management aspects of the medication error problem; and (18) Recommendations.

The first appendix presents a collection of reports of medication errors reprinted from Lippincott's *Hospital Pharmacy* (entry 816) from 1975 to 1980. Appendix 2 reproduces the American Society of Hospital Pharmacists' *Guidelines on Hospital Drug Distribution and Control* and the section on pharmaceutical services from the *Accreditation Manual for Hospitals*, 1980 edition, issued by the Joint Commission on Accreditation of Hospitals.

403. DeMarco, Carl T. **Pharmacy and the Law**. 2nd ed. Rockville, MD: Aspen Systems Corporation, 1984. 464p. bibliog. index. \$39.50. LC 84-2991. ISBN 0-8944-59-4.

Society regulates the practice of pharmacy more than it does any other health care profession. Laws and regulations identify who is qualified to practice; defines the place in which practice is conducted; regulates many specific tasks that are performed; establishes artificial time, quality, and cost parameters for products dispensed; and may even prescribe the content and format of the information given to a patient. Pharmacists must be familiar with laws and regulations on all levels, federal, state, and local.

This book was written for all practicing pharmacists as a reference work and for students as a textbook. The author says the reader also should be familiar with the federal Food, Drug, and Cosmetics Act; the Controlled Substances Act; and the states' pharmacy laws.

The material is presented in the following main parts: (1) Introduction to law; (2) The professional practice of pharmacy; (3) Drug laws; (4) Controlled substances; and (5) Professional liabilities. There are also a number of useful appendices: (1) Uniform Professional Continuing Education Act; (2) Model state pharmacy act; (3) Model regulations for institutional pharmacy; (4) Model regulations for nuclear pharmacy; (5) Roster of secretaries of state boards of pharmacy; (6) Selected federal laws, regulations, and agencies; (7) Model drug product selection act; and (8) Table of abbreviations.

404. Francke, Donald E., and Harvey A. K. Whitney, Jr., eds. **Perspectives in Clinical Pharmacy: A Textbook for the Clinically Oriented Pharmacist Wherever He May Practice**. Hamilton, IL: Drug Intelligence Publications, 1972. 535p. illus. bibliog. index. LC 74-177913. ISBN 0-914768-07-7.

Written when clinical pharmacy was still a maturing concept, this work is one of the first to treat the subject. An essay on how clinical pharmacy evolved by Gloria Francke is included, which concludes by saying that "Practicing in the patient care environment does call for new skills from the pharmacist and perhaps these are the newest things about clinical pharmacy." These skills are reviewed in the book by various authors. Three objectives guided the selection of subject matter for the book: (1) to give the reader an orientation to the health care system; (2) to acquaint the reader with some of the evolving concepts and point out their relationship to various systems of drug distribution; and (3) to present information the pharmacist will use in daily practice.

Chapter titles are: (1) Newer dimensions in health care systems; (2) Evolvement of clinical pharmacy; (3) The social psychological role of the pharmacist in drug usage; (4) The triumvirate of the health care team—physician, pharmacist, and nurse; (5) Developing a clinical pharmacy program in the hospital; (6) Recent advances in drug distribution systems and their economic feasibility; (7) Developing a parenteral

admixture service; (8) Building a clinically oriented drug information service; (9) Drug interactions and their therapeutic implications; (10) Drug therapy and diet; (11) Drug surveillance for patient safety; (12) Interviewing and advising the patient; (13) The clinical pediatric specialist; (14) Pharmacy services in small hospitals, extended care facilities and nursing homes; (15) The clinical pharmacist in an interprofessional group practice; (16) Biological half-lives and their clinical applications; (17) pKa values and some clinical applications; (18) Formulation of nonsterile dosage forms; (19) Principles of parenteral dosage forms; (20) Predicting drug stability of parenteral admixtures; (21) Some physical and chemical incompatibilities of drugs for I.V. administration; (22) Dialysis of drugs and poisons; (23) Drug interference with diagnostic tests; (24) Significance of selected laboratory tests; and (25) Principles of experimental design for clinical drug studies.

The perspectives revealed in the work have become widely accepted in American pharmacy practice, as the editors and contributors foresaw.

405. Hart, Laura K. **The Arithmetic of Dosages and Solutions: A Programmed Presentation**. 5th ed. St. Louis, MO: C. V. Mosby, 1981. 68p. \$10.95pa. LC 80-29474. ISBN 0-8016-2076-7.

Intended primarily for nurses, this programmed text can assist in the study of the arithmetic of dosages and solutions of drugs. The programs are designed for self-study so that the reader can work independently and at his own speed.

There are six units: (1) Metric system; (2) Calculation of fractional dosages; (3) Apothecaries' system; (4) Conversion of approximate equivalents; (5) Household measures; and (6) Solutions from pure drugs and stock solutions. Appended is a brief presentation on the calculation of infants' and children's dosages.

406. Hassan, William E., Jr. **Hospital Pharmacy**. 4th ed. Philadelphia, PA: Lea & Febiger, 1981. 588p. illus. bibliog. index. \$29.50. LC 80-20700. ISBN 0-8121-0772-1.

Hassan writes that since the first edition of this book in 1965, the institutional practice of pharmacy has made great progress. Professional hospital and clinical pharmacists now practice in hospitals, extended care facilities, nursing homes, neighborhood health centers, and satellite clinics. There have been other changes; government and accrediting bodies, administrators, and directors of nursing expect pharmacy services to provide a higher standard of care. A large percentage of the material in this text deals with applications of current American Society of Hospital Pharmacy guidelines and Joint Commission on Accreditation of Hospitals requirements and recommendations.

Chapter headings are: (1) Introduction; (2) The hospital and its organization; (3) The pharmacy—its organization and personnel; (4) The Pharmacy and Therapeutic Committee; (5) The Hospital formulary; (6) Pharmacy communications; (7) Investigational use drugs; (8) Developing the budget; (9) Purchasing and inventory control; (10) Medical service representative-pharmacist relationship; (11) The pharmacy procedural manual; (12) Drug distribution—floor stock system; (13) Dispensing to in-patients; (14) Dispensing to ambulatory patients; (15) Dispensing ancillary supplies; (16) Dispensing of controlled substances; (17) Tax-free alcohol—its procurement and control; (18) Dispensing during off-hours; (19) Drug changes in the hospital; (20) Pre-packaging in the hospital; (21) Manufacturing—bulk and sterile; (22) The combined pharmacy-central sterile supply room; (23) The pharmacist and radioisotopes; (24) The physical plant and its equipment; (25) The pharmacy library—drug information center; (26) The role of the hospital pharmacist in educational and training programs;

(27) Preparation of the annual report; (28) Safe use of medications in the hospital; (29) The small hospital, nursing homes and part-time pharmacists; and (30) Professional practices and relations.

The book is intended primarily as a text for a basic course in hospital pharmacy for the undergraduate student, but it is also suitable for a practicing pharmacist as a supplementary reference book.

407. Herfindal, Eric T., and Joseph L. Hirschman, eds. **Clinical Pharmacy and Therapeutics**. 3rd ed. Baltimore, MD: Williams & Wilkins, 1984. 977p. illus. bibliog. index. \$39.95. LC 83-16795. ISBN 0-683-03962-8.

When the first edition of this text appeared in 1975, pharmacists had only begun to assume the responsibility of ensuring that patients received optimum drug therapy. This led to changes in the curricula of pharmacy schools, and these newer concepts of practice came to be known as clinical pharmacy. The role of the clinical pharmacist has, of course, developed rapidly. The editors of the book hold academic positions, as do most of the contributors. They have attempted to present their material so as to bridge the gap between pathology, biochemistry, and pharmacology, applying these interrelated subjects to the treatment of disease. The text is suitable for undergraduate pharmacy courses.

The material is divided among these sections: (1) General (includes clinical toxicology, parenteral nutrition, pediatrics, obstetrics and gynecology, and alcoholism); (2) Infectious disease; (3) Gastrointestinal diseases; (4) Cardiovascular disorders; (5) Respiratory diseases; (6) Endocrine and metabolic diseases; (7) Renal diseases; (8) Rheumatic diseases; (9) Diseases of the blood; (10) Neurological and psychological disorders; (11) Diseases of the eye; (12) Skin diseases; and (13) Neoplastic diseases. New material in this edition includes chapters on parenteral nutrition, parasitic and mycotic diseases, pain management, diarrhea and constipation, and fluid and electrolyte balance.

408. Huffman, D. C., and Roger L. Davis. **Pharmacy Economics in Long-Term Care Facilities**. Memphis, TN: American College of Apothecaries; Arlington, VA: American Society of Consultant Pharmacists, 1981. 181p. bibliog. \$25.00pa. LC 81-142686. ISBN 0-934322-02-3.

The material presented in this work is divided into four main sections. The first section, on economic considerations, includes a discussion of federal guidelines. The second section, "Suggested Consultant (Retainer) and Provider Agreements," considers typical contracts (annotated with appropriate explanation) for use between facility and pharmacist, between facility and pharmacy-provider, and between individual residents and pharmacy. The third section, on projecting income and expenses, discusses factors affecting income and expenses, basic financial terms, and prescription dispensing costs. The last section, on capital requirements, takes up the inventory investment, measures of inventory control, equipment, and accounts receivable.

There are useful appendices: (1) Federal Medicaid guidelines on payment of reasonable charges for prescribed drugs; (2) Financial statement analysis and budget preparation; (3) Manufacturers and suppliers of long-term care facilities materials (a list with addresses); (4) Considerations relating to payment for pharmaceutical services; (5) A survey of long-term care pharmacy operations; and (6) A chapter on planning reprinted from another publication.

409. Jenkins, Glenn L., Glen J. Sperandio, and Clifton J. Latiolais. **Clinical Pharmacy: A Text for Dispensing Pharmacy**. New York: McGraw-Hill, Blakiston Division, 1966. 379p. illus. index. LC 65-25546.

When this text was written, it was a departure from the conventional texts on compounding and dispensing in that it minimized the theoretical considerations of compounding and emphasized the professional applications of the pharmacist in his dealings with the public. The book was intended to supplant the time-honored Scoville's *The Art of Compounding* and used material from it, adding newer material. The authors felt that the art of compounding had been replaced by the science of formulation; manual procedures had given way to industrial processes; and the emphasis on prescription medication had shifted from preparation to formulation. No literature references have been included to supplement the text, but there is a section on the pharmacy as an information center that lists drug information reference sources.

Although somewhat out of date now, the book includes some basic information still of interest. There are chapters on dosage forms, the prescription, solutions, colloidal dispersions, sterilization, ophthalmic solutions, parenteral medication, allergenic extracts, emulsions, ointments, suppositories, aerosol preparations, radioactive pharmaceuticals, incompatibilities, investigational drugs, the drug information center, pharmacy service in small hospitals and nursing homes, and homeopathic pharmacy.

410. Katcher, Brian S., Lloyd Y. Yount, and Mary Anne Koda-Kimble, eds. **Applied Therapeutics: The Clinical Use of Drugs**. 3rd ed. San Francisco, CA: Applied Therapeutics, 1983. 1619p. bibliog. index. \$54.00. LC 82-073291. ISBN 0-915486-05-9.

Previous editions of this unique work were entitled *Applied Therapeutics for Clinical Pharmacists*, and they were intended especially for hospital pharmacists. The new name was adopted because of the growing acceptance of the book among medical students, interns and residents, and nurse practitioners and physicians' assistants. The objectives are the same: to illustrate the appropriate clinical application of pharmacology and pharmacokinetics to specific patient problems. This is carried out through the use of case histories, pertinent questions, and well-referenced responses.

Section headings are: (1) General principles; (2) General care; (3) Cardiovascular disorders; (4) Respiratory disorders; (5) Gastrointestinal disorders; (6) Hepatic disorders; (7) Renal disorders; (8) Disorders of metabolism and nutrition; (9) Infectious disease; (10) Hematopoietic disorders; (11) Neoplasms; (12) Psychiatric disorders; (13) Drug abuse; (14) Neurologic disorders; (15) Skin disorders; (16) Eye disorders; (17) Contraception; (18) Endocrine disorders; (19) Joint and connective tissue disorders; (20) Special age groups; and (21) Poisonings.

Each chapter begins with a brief discussion of the pathophysiology, characteristics, vital statistics, and so on of the disease under consideration. A case history is then presented, followed by practical questions.

The book has been well accepted, particularly as a text to supplement the teaching of clinical applications of drug therapy.

411. King, Robert E., ed. **Dispensing of Medication**. 9th ed. Easton, PA: Mack Publishing, 1984. 536p. illus. bibliog. index. \$28.95pa. LC 84-61218. ISBN 0-912734-08-6.

Called "a practical manual on the formulation and dispensing of pharmaceutical products," this newly revised edition of a standard work emphasizes both the traditional and the newer roles of the pharmacist. The first edition, authored by William J. Husa, was published nearly 50 years ago.

Each chapter is by a different author or authors, almost all of whom hold academic positions. Chapter headings are: (1) Medication orders; (2) Powders; (3) Capsules; (4) Tablets; (5) Dermatologicals; (6) Suppositories; (7) Liquid medications; (8) EENT preparations; (9) Parenteral medications; (10) Aerosols; (11) Appraisal of product quality; (12) Extemporaneous formulations; and (13) Compounding and dispensing information. The book contains specific compounding and dispensing information for over 1200 drug products and drug substances. Some of the newer areas covered include the pharmacist's role in drug information, patient profiles, patient counseling, and patient compliance and the use of computers in pharmacy practice.

Although intended primarily as a textbook, the book has a good deal of reference value.

412. Lamnin, Marlene. **Quality Assurance in Hospital Pharmacy: Strategies and Techniques**. Contributing author: Gary L. Snodgrass. Rockville, MD: Aspen Systems Corporation, 1983. 224p. bibliog. index. \$25.00. LC 82-18167. ISBN 0-89443-925-1.

The author of this work is director of quality assurance for Hospital Pharmacy Incorporated, and the contributing author is director of clinical services for the same organization. The purpose of the book is to look at quality assurance (QA) from the perspective of the hospital pharmacist and present material of practical value to serve as a guide to the use of QA as a management tool. It is recommended for those who intend to make hospital pharmacy a career.

The book contains 18 chapters grouped under two headings: Overview of Quality Assurance and Pharmacy-Specific Quality Assurance. The book is easy to read and can increase the reader's knowledge of many aspects of pharmacy practice. Good pharmacy practices are highlighted, however, more than specific QA activities.

It is important at the present time that hospitals have good QA programs because of two influential and perhaps conflicting factors. The first is the increasingly complex and expensive therapy that has been developing, and the other is reimbursement by Diagnosis-Related Groups, making it tempting to cut corners.

413. Luedtke, Peter, and Ranier Luedtke. **Computers for Pharmacies**. San Diego, CA: Harcourt Brace Jovanovich, 1984. 1 volume. Looseleaf with slipcase. (HBJ Computer Selection Series). \$45.00. LC 84-4517. ISBN 0-15-02236-6.

The authors of this guide say that whether you have already purchased a computer system for your pharmacy or are just thinking about doing so, this book will help you meet the challenges ahead. It provides a detailed guide to choosing the right system. The reader is warned that many computer shoppers find there are many more pitfalls than they had imagined.

The book presents an overview in these chapters: (1) Eight steps to a successful computer system; (2) Overview of computers and pharmacy systems; (3) The benefits of a pharmacy computer system; and (4) The feasibility of computerization. Selection criteria are discussed in these chapters: (5) Evaluating pharmacy systems; (6) Application suitability; (7) Power and capacity; (8) Reliability; (9) Ease of use; and (10) Expandability. Chapter 11 is on the selection process; Chapter 12 tells how to make the request for proposal to be sent to vendors; and Chapter 13 discusses implementing and managing the system chosen. Chapter 14 is a vendor directory.

414. McLeod, Donald C., and William A. Miller, eds. **The Practice of Pharmacy: Institutional and Ambulatory Pharmacy Services**. Cincinnati, OH: Harvey Whitney Books, 1981. 502p. illus. bibliog. index. \$34.50. LC 81-5177. ISBN 0-9606488-0-1.

Pharmacy practice in hospitals and other institutional settings has undergone great change since the mid-1960s. The most important change has been the development of clinical pharmacy practice with its broad mission of rational drug therapy. Clinical pharmacy has become an integral part of the total pharmacy program, and principles of clinical pharmacy are presented in this textbook. It should prove valuable to pharmacy educators, administrative pharmacists, clinical pharmacists, students of pharmacy, and health care administrators and planners.

There were eight sections presented, each containing several chapters that were written by various authors. Section headings are: (1) Philosophy of practice; (2) Principles and techniques of clinical practice; (3) Inpatient clinical practice programs; (4) Ambulatory clinical practice programs; (5) Management of pharmacy services; (6) Pharmacy service technology; (7) Practice in selected health care facilities; and (8) Postgraduate training.

415. Majerus, Thomas C., and Joseph F. Dasta, eds. **Practice of Critical Care Pharmacy**. Rockville, MD: Aspen Systems Corporation, 1985. 315p. bibliog. index. \$36.00. LC 84-21742. ISBN 0-89443-571-X.

This is the first book that addresses the practice of pharmacy in critical care. Its purpose is to stimulate interest in this aspect of pharmacy practice and to provide guidance to interested students, administrators, and educators. The authors are established practitioners from various health care fields who together provide a view of holistic care in the treatment of the critically ill and injured.

The presentation is in two main parts: emerging roles and present and future roles. Chapter headings are: (1) Introduction to critical care; (2) The justification of critical care pharmacy positions in hospitals; (3) The expansion of clinical pharmacy education to critical care pharmacy training; (4) The fellowship program in critical care pharmacy; (5) Nurses: the pivotal element in critical care pharmacy; (6) Critical care nursing education in a neurotrauma center—a learning contract; (7) The pharmacist in surgical intensive care and anesthesiology; (8) The pharmacist in neurosurgery intensive care; (9) The pharmacist in coronary care and cardiovascular surgery intensive care; (10) The pharmacist in medical intensive care; (11) The pharmacist in pediatric and neonatal intensive care; (12) The pharmacist in emergency medicine; and (13) The pharmacist in the trauma center. An epilogue discusses the future of critical care pharmacy, and a critical care bibliography is appended.

416. Medici, Geraldine Ann. **Drug Dosage Calculations: A Guide for Current Clinical Practice**. Englewood Cliffs, NJ: Prentice-Hall, 1980. 233p. illus. \$14.95pa. LC 79-19064. ISBN 0-13-220764-8.

The intent of this book is to develop the reader's competence in calculating drug dosages. It is organized as a learning module and will enable the reader to progress at his own speed. Included are a preentry math test and ten chapters as follows: (1) Metric measures; (2) Apothecary measures; (3) Household measures; (4) Conversion between metric and household measures; (5) Conversion among metric, apothecary, and household measures; (6) Other measurements of medication; (7) Preparation of solutions; (8) Intravenous flowrates; (9) Mathematical aspects of administration of intravenous medication; and (10) Children's and infants' dosages.

The author of the work is a professor of nursing, so it is presumed that the book is intended primarily for nursing students. However, it is said to be for anyone who will be administering medicines.

417. Nold, Edward, and William Gouveia, eds. **Managing Computer Systems: Pharmacy and Other Hospital Departments**. Bethesda, MD: American Society of Hospital Pharmacists, 1983. 316p. bibliog. index. \$35.00pa.

This publication is a compilation of 59 articles on computerization of hospital pharmacy services that were originally published in the *American Journal of Hospital Pharmacy* and *Hospital Pharmacy*. Most are from the former journal and were published during 1969-1982. The book is intended primarily for hospital pharmacy managers who are or may be involved in developing a computer system, but pharmacy students, hospital pharmacists, and hospital administrators may also be interested in it.

There are four main sections: (1) Literature review; (2) Administrative applications; (3) Drug distribution applications; and (4) Clinical applications. There are two appendices, one on hospital pharmacy computer systems (a product directory), and the other on critical path scheduling and implementation of a computer system. In addition, there are a glossary and a bibliography.

Although computer materials become outdated rapidly, the book is valuable because it brings together scattered information.

418. Pecherer, Angela R., and Suzanne L. Vertuno. **How to Calculate Drug Dosages: A Ready Reference and Textbook**. Consulting editor: Jill Burk. Oradell, NJ: Medical Economics; and Albany, NY: Delmar Publishers, 1979. 80p. bibliog. index. \$10.95pa. ISBN 0-87489-140-X; 0-8273-1834-0.

The authors of this book are nurses. The purpose of their work is twofold: to provide a quick reference for calculating drug doses on the job and to serve as a text in the classroom.

The first chapter is a review of basic arithmetic. Other chapters cover weights and measures, preparing solutions, calculating dosages, intravenous infusions, and giving medications to infants and children. A section of practical problems has been included. These pages may be torn out and used as classroom or self-testing exercises. Answers are provided.

419. **Pharmacy Law Digest, 1984**. Edited by Joseph L. Fink III, Karl W. Marquardt, Larry M. Simonsmeier, and Eugene L. Kaluzny. Media, PA: Harwal Publishing, 1984. Looseleaf. bibliog. index. \$34.95; Supplements \$20.00 per year. LC 72-115322. ISBN 0-932036-06-6; ISSN 0149-1717.

The material in this looseleaf compilation of about 1300 pages is intended to inform, not advise. The pharmacist is required to know and understand the law affecting his professional practice, and this book should assist him. It consists of condensed explanatory text material and reproductions of applicable portions of laws or regulations. It attempts to present law in such a manner as to help the pharmacist develop the awareness necessary to make compliance realistic and attainable.

The material is presented in seven sections: (1) Introduction; (2) Controlled substances; (3) Pharmacy inspection; (4) Drug control law; (5) Civil liability; (6) Business law; and (7) Court cases. The following appendices are included: glossary, glossary of legal terms, United States Constitution, alphabetical index, and index of court cases.

420. Plein, Joy B., and Elmer M. Plein. **Fundamentals of Medications: A Text-Workbook of Dosages, Principles of Pharmacology and Methods for Providing Drug Therapy**. 2nd ed. With a Foreword by Donald E. Francke. Hamilton, IL: Drug

Intelligence Publications, 1974. 160p. illus. bibliog. \$9.50. LC 74-15503. ISBN 0-914768-14-X.

Although written by pharmacists, this book is intended primarily for nursing students. It is also appropriate, however, as a text-workbook for pharmacy technicians or for use as an orientation for pharmacy students.

The following chapters are included: (1) Introduction; (2) Sources, development and evaluation of drugs; (3) Route of administration and dosage forms of drugs; (4) Metrology; (5) Solutions; (6) Small doses of liquid drugs; (7) Parenteral administration of drugs; (8) Milliequivalent doses of ions; (9) Pediatric doses; (10) Temperature conversion; (11) Latin terms and abbreviations; (12) Drug distribution systems; (13) Drug legislation; (14) General principles of pharmacology; and (15) Some of the pharmacologic classes of drugs. There is a "Mathematics Supplement" section that covers basic mathematics. Practical mathematics problems are also included with most chapters, but these deal with the mathematics of drug administration.

421. Poe, William D., and Donald A. Holloway. **Drugs and the Aged**. New York: McGraw-Hill, 1980. 209p. illus. bibliog. index. \$6.95pa. LC 79-15451. ISBN 0-07-05330-3.

The authors of this book have related their experience in the medication of the elderly. One is a physician and the other a pharmacist at a retirement home. They say they have presented no new scientific information but have attempted to emphasize the changes that occur with aging as they apply to such things as absorption, utilization, and excretion of drugs. The book is intended for physicians, pharmacists, students, social workers, nurses, therapists, administrators, and even patients and their families.

The following chapters are included: (1) Introduction; (2) Metabolism and pharmacokinetics; (3) The case of Mrs. O.; (4) How drugs work; (5) Undesirable drug effects; (6) Gastrointestinal drugs; (7) Drugs used in cardiovascular disease; (8) Mind drugs; (9) Organic brain syndromes; (10) Disorders of motion; (11) Pain relief in the elderly; (12) Placebos and placebo effects; (13) Arthritis and its treatment; (14) Infections in the elderly; (15) Vitamins, minerals, and hematinics; (16) Pharmacy procedures in a retirement community; (17) The pharmacist's roles in the nursing home; (18) Legal responsibilities of the pharmacist in long-term care facilities; and (19) Summary. In Chapter 3 the authors present a case history of an elderly patient who was overmedicated.

422. Richardson, Lloyd I., Jr., and Judith Knight Richardson. **The Mathematics of Drugs and Solutions with Clinical Applications**. 2nd ed. New York: McGraw-Hill, 1980. 160p. \$12.95pa. LC 79-17004. ISBN 0-07-052311-8.

Intended primarily for nursing students, the purpose of this brief textbook is to enable the reader to solve the mathematics of drugs and solutions encountered in the everyday routine of administering medications. The book has been structured to serve as a supplement to a course, as a self-study guide for those wishing to increase their proficiency in working drug problems, and also as a text for a short course in drugs and solutions. The text differs from other recent ones in that it is not programmed. A continuous instructional sequence is used instead.

The chapter headings are: (1) Mathematics review; (2) Systems of measurement; (3) Oral medications; (4) Parenteral medications; (5) Pediatric medications; and (6) Preparation of solutions. Answers to examples, tests, and exercises are included.

423. Saxton, Dolores F., Norma H. Ercolano, and John F. Walter. **Programmed Instruction in Arithmetic, Dosages, and Solutions**. 5th ed. St. Louis, MO: C. V. Mosby, 1982. 84p. \$7.95pa. LC 81-18766. ISBN 0-8016-4327-9.

Although similar to Hart's book (see entry 405), this programmed presentation has something additional, an inventory test or pretest section and review tests at the end of the book. The former will allow the student to assess strengths and weaknesses and focus on weaknesses. The book is intended primarily for nurses to assist them in the arithmetic of dosages and solutions of drugs.

The following sections are included: (1) Inventory test in arithmetic; (2) Basic concepts; (3) Systems of measurement; (4) Mathematics involved in computing dosage of medications and preparation of solutions; and (5) Review tests.

424. Smith, Harry A. **Principles and Methods of Pharmacy Management**. 2nd ed. Philadelphia, PA: Lea & Febiger, 1980. 413p. bibliog. index. \$19.50. LC 80-17560. ISBN 0-8121-0765-9.

Considerable effort has been put forth in this popular text to provide most, if not all, of the material needed for a one-semester general course in pharmacy management. In addition, it provides a general framework for a two-semester course.

The presentation can be divided into several segments. The first four chapters deal with subjects in the social and behavioral sciences. The next segment discusses how one establishes or acquires a pharmacy practice. The third section treats the subject of image and motivation in the context of the public image of pharmacy, patronage, and the promotion of the goods and services offered in a pharmacy. The last section covers entrepreneurial concerns of the pharmacist. A section on the application of computer systems has been included.

Chapter headings are: (1) The origin, development, and alternatives of pharmacy practice; (2) Nature and principles of management; (3) Organization; (4) Personnel administration; (5) Planning a pharmacy practice; (6) Location analysis and evaluation; (7) Pharmacy layout design; (8) Purchasing; (9) Inventory control; (10) Pricing and professional fees; (11) Pharmacy services and patronage; (12) Promotion; (13) Financial analysis and management; (14) Control mechanisms; and (15) Risk management and insurance.

425. Smith, Mickey C., and Thomas R. Brown, eds. **Handbook of Institutional Pharmacy Practice**. With the assistance of the American Society of Hospital Pharmacists. Baltimore, MD: Williams & Wilkins, 1979. 693p. bibliog. index. \$32.00. LC 78-16182. ISBN 0-683-07884-4.

This handbook provides a grounding in institutional pharmacy for the student and a ready reference volume for the practitioner. The framework for the book is the competency statement of the American Society of Hospital Pharmacists. Relevant excerpts from the statement appear at the beginning of each section of the work. The book provides the reader with the nature and scope of the subject, examples of practical applications, and a good bibliography with some annotations.

There are nine sections as follows: (1) Overview; (2) Administration and management; (3) Drug information and drug actions; (4) Product formulation, packaging, and distribution; (5) Research; (6) Patient-oriented services; (7) Educational activities; (8) Quality assurance; and (9) Special topics. There are a number of appendices, most covering American Society of Hospital Pharmacists guidelines and statements.

426. Smith, Mickey C., and David A. Knapp. **Pharmacy, Drugs and Medical Care.** 3rd ed. Baltimore, MD: William & Wilkins, 1981. 330p. bibliog. index. \$19.95pa. LC 80-25200. ISBN 0-683-07761-9.

The emphasis of this book is on providing an introduction to pharmacy and to drugs within the context of today's changing health care system. Many facets of the field are covered, including the industry, ethics, functions, and types of pharmacies, social goals, and major issues facing the profession.

Chapter headings are: (1) Introduction; (2) Pharmacists; (3) Pharmacy settings and types of practice; (4) Pharmaceutical education; (5) Control of the practice of pharmacy; (6) Pharmacy organizations and periodicals; (7) Social goals in health; (8) Ecological dimensions of health problems; (9) The ill person; (10) Origins and development of drugs; (11) Drug use; (12) Drug abuse; (13) Providing health care: elements of the system; (14) Health manpower; (15) Development of pharmacy as a profession; and (16) Toward optimal pharmacy services. Appendices present a brief guide to accredited U.S. pharmacy schools and requirements for examination and registration.

The book concludes by examining how well pharmacy measures up to performance criteria generally accepted in medical care as well as to principles adopted by the American Public Health Association. In addition, issues that are likely to affect pharmacy in the future are discussed.

427. Smith, Mickey C. **Principles of Pharmaceutical Marketing.** 3rd ed. Philadelphia, PA: Lea & Febiger, 1983. 529p. illus. bibliog. index. \$29.75. LC 82-6624. ISBN 0-8121-0858-2.

This is a well-known marketing book that deals exclusively with pharmaceuticals and is designed primarily for undergraduate students with little background in marketing; however, the book also is useful to those involved in pharmaceutical marketing and anybody interested in the intricacies involved in the marketing of pharmaceutical products. A number of professionals contributed to the book. In general, they take an applied approach.

The presentation is in five parts, each containing several chapters: (1) The pharmaceutical market; (2) The pharmaceutical product; (3) Distribution channels; (4) Competitive practices; and (5) Controls.

The book has been well received and is widely used as a text and reference source.

428. Stoklosa, Mitchell J., and Howard C. Ansel. **Pharmaceutical Calculations.** 7th ed. Philadelphia, PA: Lea & Febiger, 1980. 385p. index. \$15.00. LC 80-10333. ISBN 0-8121-0725-X.

A valuable calculations text, this is a comprehensive work providing instruction and practice problems for a wide range of calculation situations. A particularly strong chapter is the one on dosage calculations, which includes a good section on body surface area calculations.

Chapter headings are: (1) Some fundamentals of measurement and calculation; (2) Interpretation of the prescription or medication order; (3) The metric system; (4) The common systems; (5) Conversion; (6) Calculation of doses; (7) Reducing and enlarging formulas; (8) Density, specific gravity, and specific volume; (9) Weights and volumes of liquids; (10) Percentage preparations; (11) Dilution and concentration; (12) Isotonic solutions; (13) Electrolyte solutions; (14) Some calculations involving parenteral admixtures; (15) Exponential and logarithmic notation; (16) Some calculations involving hydrogen-ion concentration and pH; (17) Some calculations

involving buffer solutions; (18) Some calculations involving radioisotopes; and (19) Basic statistical concepts. There is also a large appendix section of practical information and practice and review problems.

429. Strauss, Steven. **The Pharmacist and the Law**. Baltimore, MD: Williams & Wilkins, 1980. 124p. \$9.95pa. LC 80-98. ISBN 0-683-08008-3.

This book provides a selection of readings covering a wide range of topics in pharmacy law. It is intended to make available in convenient form writings that are of interest particularly to pharmacy students, but also to faculty members, practitioners, and lawyers. The work can be used as a supplementary textbook. The writings were selected from articles published in the *U.S. Pharmacist* (see entry 950) during 1977-1979. Twenty-three articles are included, plus a glossary of appropriate legal terms.

Topics covered include what to expect when a lawsuit is started, inspection of pharmacies, pharmacy board disciplinary action, prescription filling, prescription records, prescribing by veterinarians, product selection and substitution, liability, antitrust developments, good samaritan laws, and over-the-counter drug product reviews.

430. **Survey of Pharmacy Law, 1983-84**. Chicago, IL: National Association of Boards of Pharmacy (One East Wacker Dr., Suite 2210, Chicago, IL 60601), 1983. 32p. \$8.00pa.

This annual survey provides historical and contemporary information covering state laws that pertain to pharmacy practice. All 50 states, the District of Columbia, and Puerto Rico are covered. Information given is mostly in tabular form and is presented under these headings: organizational law, licensing law, internship law, and drug law. Detailed information provided includes date of first enactment of pharmacy law, the board year (e.g., 1 January-31 December), whether reprints of laws and regulations are available, the number of examinations given annually, the composition of the boards, who appoints board members, who makes rules and regulations in the states, and who may suspend or revoke licenses. Also included are qualifications for appointment to state boards, requirements for licensure, fees charged, information on controlled substances acts, and prescribing authority.

A Roster of Secretaries of all the National Association of Boards of Pharmacy active member boards has been included.

431. Tindall, William N., Robert S. Beardsley, and Frederick R. Curtiss, eds. **Communication in Pharmacy Practice: A Practical Guide for Students and Practitioners**. Philadelphia, PA: Lea & Febiger, 1984. 182p. bibliog. index. \$11.50pa. LC 83-19887. ISBN 0-8121-0923-6.

This book was written because of a growing awareness nationwide that better communication skills were needed to improve pharmacist-patient understanding. Pharmacists are called on to counsel patients concerning their medications, and good communication can improve compliance and augment health care. The book is written in the form of a self-teaching tool; each chapter builds on the previous ones.

The chapters are written by various authors and are headed as follows: (1) Principles and elements of interpersonal communication; (2) Nonverbal communication in pharmacy; (3) Barriers in communication; (4) Misunderstanding and misperception; (5) Empathy; (6) Listening skills; (7) The patient interview; (8) Effective telephone communication; (9) Interpersonal persuasion; (10) Assertiveness; (11) Communication

apprehension and shyness; and (12) Ethics in pharmacy communication. Each chapter has an opening abstract, an introduction, several defined sections, a closing summary, and literature references.

432. **Understanding Your Prescription.** Bethesda, MD: American Society of Hospital Pharmacists, 1983. 16p. illus. \$.25pa. (quantity prices available).

A booklet suitable for patient education, this illustrated work explains in very simple fashion what the layperson should know about the use of prescription medicines. The illustrations are cartoons, which on first glance makes the booklet seem too simple for adults. Essential facts, however, are well covered.

433. Wartak, Joseph. **Drug Dosage and Administration: Modern Theory and Practice.** Baltimore, MD: University Park Press, 1983. 173p. illus. bibliog. index. \$32.50. LC 82-17417. ISBN 0-8391-1786-8.

Written by a research cardiologist, this book is an attempt to address the matter of physical characteristics and clinical use of drug products. It presents basic rather than advanced material. Dosage adjustments for pediatric and adult patients are discussed, emphasizing individual physical traits.

The material is arranged in these parts, with several chapters in each: (1) Dosage of drugs; (2) Drug concentrations in blood; (3) Presentation of drugs; (4) Administration of drugs; and (5) Rational use of drugs.

The book is intended for practicing clinicians, nurses, pharmacists, and medical students, but some reviews say it can be recommended only for such groups as the junior medical student, nursing staff, or other paramedical personnel because it presents a superficial view of the many concepts embodied in the disciplines of pharmacokinetics and biopharmacokinetics and their application to drug therapy. The concepts are presented in a simple fashion and can be read easily by a layperson.

434. Washington University. School of Medicine. Department of Medicine. **Manual of Medical Therapeutics.** Edited by J. William Campbell and Mark Frisse. 24th ed. Boston, MA: Little, Brown, 1983. 469p. index. \$16.95pa. LC 64-22714. ISBN 0-316-92395-8.

Although originally planned as a guide for medical students in a course in medical therapeutics, this manual has had over the years much wider distribution among medical professionals. The emphasis of the work is on therapeutics, and pathophysiologic mechanisms are discussed only when necessary for understanding the therapies.

The chapters, by various authors, are headed as follows: (1) General care of the patient; (2) Fluid and electrolyte disturbances; (3) Renal diseases; (4) Coronary heart diseases; (5) Congestive heart failure; (6) Cardiac dysrhythmias; (7) Hypertension; (8) Acute respiratory failure; (9) Pulmonary disease; (10) Antimicrobials and infectious diseases; (11) Nutritional therapy; (12) Liver disease; (13) Gastrointestinal bleeding; (14) Gastrointestinal diseases; (15) Anemia and red cell transfusion; (16) Bleeding disorders; (17) Chemotherapy in malignant disease; (18) Thyroid disease; (19) Mineral, parathyroid, and metabolic bone disorders; (20) Diabetes mellitus and hyperlipidemia; (21) Arthritis and related disorders; (22) Neurologic emergencies; and (23) Medical emergencies. Among the appendices are a nomogram for calculating the body surface area of adults, immunization information, and laboratory reference values.

435. Watanabe, Arthur S., and Christopher S. Conner. **Principles of Drug Information Services: A Syllabus of Systematic Concepts**. Hamilton, IL: Drug Intelligence Publications, 1978. 240p. bibliog. index. \$16.25. LC 78-50219. ISBN 0-914768-31-X.

The aim of this syllabus is to provide the student with a means for the development and self-evaluation of the skills required to function as a drug information consultant. It has a systematic approach; each chapter builds on the previous ones. Examples presented are intended to simulate situations that may be encountered during student clerkship experience and practice following graduation from pharmacy school. Most chapters are set up with a statement of behavioral objectives, a general discussion, and self-evaluation questions and learning examples.

Chapter headings are: (1) Introduction to drug information concepts; (2) How to classify a request; (3) How to obtain history and background information; (4) How to conduct a systematic literature search; (5) How to evaluate information sources; (6) How to formulate and communicate a response; (7) Situations and problems in providing drug information; and (8) The systematic approach exemplified by case studies.

436. Weaver, Mabel E., Vera J. Koehler, and Virginia Poole Arcangelo, revising author. **Programmed Mathematics of Drugs and Solutions**. 1984 revision. Philadelphia, PA: J. B. Lippincott, 1984. 138p. \$6.75pa. LC 83-12079. ISBN 0-397-54475-8.

This self-paced work is designed for nursing students. It can be used as an introduction to the subject or as a refresher text. Preliminary materials include a list of common abbreviations, a glossary, and a pretest. The main chapters cover: (1) The metric system; (2) The apothecaries' system; (3) Household measurements; (4) Equivalents; (5) Oral medications; (6) Syringes; (7) Injectable liquids; (8) Drugs measured in units; (9) Preparation of drugs packaged in powders and tablets; (10) Mixing parenteral medications; (11) Preparation of solutions; (12) Medications for infants and children; and (13) Intravenous medications. A comprehensive examination (with answers) is appended.

437. Wertheimer, Albert I., and Mickey C. Smith, eds. **Pharmacy Practice: Social and Behavioral Aspects**. 2nd ed. Baltimore, MD: University Park Press, 1981. 444p. bibliog. index. \$24.00pa. LC 80-22906. ISBN 0-8391-0801-X.

The first edition of this work, which appeared in 1974, placed health care in the context of a social system with the pharmacist as one of the interacting participants. The relationship of the social and behavioral sciences to both the pharmacy curriculum and pharmacy practice are examined. The book is a collection of readings organized around social and behavioral aspects of pharmacy. Each chapter contains a review of the area in question followed by one to six selected readings and some study questions.

Chapter headings are: (1) The professions; (2) The pharmacist: processes of becoming; (3) Changes and trends in pharmacy; (4) Perception of the pharmacist by others; (5) The pharmacist's potential expanded role in health and medical care; (6) Psychosocial aspects of the illness experience; (7) Psychosocial aspects of the use of medication; (8) The sociology of drugs; (9) Pharmacy worlds; (10) The health care system; (11) The organization of services; (12) Unresolved issues; and (13) A look ahead.

The first edition of the book is still valuable because the readings in the second edition are almost all new. Together the two editions make up a good selection of contemporary writings in the field. The book is suitable as either an undergraduate or

graduate text, and it provides valuable readings for those involved in the administration of pharmaceutical services and in pharmacy practice.

438. Wetherbee, Helen, and Bruce David White. **Cases and Materials on Pharmacy Law**. St. Paul, MN: West Publishing, 1980. 592p. index. \$20.95. LC 80-14608. ISBN 0-8299-2091-9.

This is not a treatise on pharmacy law, but rather a casebook, a collection of cases and other materials, edited to serve as a textbook for pharmacy students. Materials are included that present summaries of each area of law introduced. In some instances business law materials have been included to show their relevance to pharmacy practice.

The material is arranged under these general headings: introduction, regulation of the practice of pharmacy, principles of liability for pharmacists, and business law principles for pharmacists. Chapter headings are: (1) Introduction; (2) State regulation of the practice of pharmacy; (3) The federal Food, Drug and Cosmetic Act; (4) The federal Controlled Substances Act; (5) Other pertinent areas of regulation; (6) Professional liabilities; (7) Products liability; (8) Contract law; and (9) Commercial paper. Appendices include material on taking a case to court; selected FDA forms and sections of the Food, Drug and Cosmetic Act; and selected DEA forms and the Controlled Substances Act.

439. Yesalis, Charles, G. Joseph Norwood, and David Lipson, eds. **Capitation for Pharmacy Services**. Westport, CT: Technomic Publishing, 1982. 176p. illus. bibliog. \$25.00. LC 82-50272. ISBN 0-87762-308-2.

Capitation is an alternative Medicaid drug program that has attracted some attention. It is based on per capita payment to pharmacies instead of reimbursement for prescriptions. The aims of the program are to reduce costs, lessen administrative problems, and encourage pharmacists to take a more active part in such programs. The capitation program was tested in Iowa, and this book provides details on the procedures and results.

Chapter headings are: (1) Introduction; (2) History of the capitation program in Iowa; (3) General methods; (4) Generic substitution; (5) Prescription quantity and dose analysis; (6) Therapeutic category analysis; (7) Over-the-counter drug usage; (8) Drug interactions; (9) Utilization, costs, and shopping patterns; (10) Administrative costs; (11) Provider acceptance; (12) Effect on non-Medicaid prescriptions; (13) Summary; and (14) Future directions.

Although the project did not generate a great many significant results, the book has been recommended reading for educators teaching in the area of third-party reimbursement for pharmacy services. In addition, the interpretative comments in the last two chapters are probably valuable to all pharmacists. Other interested groups might include health care administrators, concerned government personnel, and pharmaceutical company managers.

440. Zatz, Joel L. **Pharmaceutical Calculations**. 2nd ed. New York: John Wiley & Sons, 1981. 388p. index. \$24.95pa. LC 80-23382. ISBN 0-471-07757-7.

This book, which features a programmed format, can serve as a text for self-instruction and also as a primary or supplementary text in a formal course.

The chapter headings are: (1) Some basics; (2) Units; (3) Conversion; (4) Formulas: the prescription; (5) Dosage; (6) Percentage strength; (7) Other ways of expressing concentration; (8) Stock solutions and titrations; (9) Dilution and concentration; and (10) Milliequivalents. Appended are sections on temperature conversion, proof strength, and iso-osmotic solutions.

14 Industrial and Physical Pharmacy

Some of the subject matter covered in this section overlaps with that dealt with in other sections, especially part 2, chapter 13 (Pharmacy Practice) and part 2, chapter 16 (Pharmacology and Toxicology).

Listed here are materials dealing in general with industrial pharmacy and basic pharmaceuticals and also many sources covering a number of specialized aspects of these areas. There are titles on dosage forms, including one specifically dealing with parenteral medications. Also included are titles on dermatologic formulations, formulations of veterinary drugs, standards for hormone drugs, and controlled drug delivery. The latter is an area that has received considerable attention.

There are several titles covering physicochemical aspects of pharmacy.

Listed are works covering drug research and development, and two titles discuss orphan drugs (drugs that are not profitable to manufacture). Additional subjects covered include quality control, dissolution testing, solubility of drugs, surfactant systems, disinfection and sterilization, and raw products.

The largest number of titles, however, deal with pharmacokinetics, a subject that has become important because the evaluation of drug concentrations in biologic fluids can be used to monitor drug therapy. Additional areas covered include biopharmaceutics, bioavailability, and drug targeting.

441. Ansel, Howard C. **Introduction to Pharmaceutical Dosage Forms**. 3rd ed. Philadelphia, PA: Lea & Febiger, 1981. 408p. illus. bibliog. index. \$29.50. LC 80-16842. ISBN 0-8121-0771-3.

Intended as an introduction to pharmaceuticals, this text has been recommended for an orientation course in pharmacy and pharmacy practice. It introduces students to

medicinal and pharmaceutical substances, the methods of their incorporation into pharmaceutical dosage forms, and utilization of these products in patient care.

Chapter headings are: (1) Introduction to drugs and pharmacy; (2) Drug substances; (3) Dosage forms and routes of administration; (4) Dosage form design: biopharmaceutic considerations; (5) Dosage form design: pharmaceutical ingredients, product formulation, and good manufacturing practice; (6) oral solutions, syrups, and elixirs; (7) Oral suspensions, emulsions, magnas, and gels; (8) Powders, granules, and solid dosage forms for oral administration: capsules and tablets; (9) Infections, biological products, and sterile fluids; (10) Aerosols, inhalations, and sprays; (11) Ointments, creams, lotions, and other dermatologic preparations; (12) Ophthalmic preparations; (13) Ear, nose, and topical oral preparations; (14) Suppositories and other rectal, vaginal, and urethral preparations; and (15) Miscellaneous preparations: tinctures, fluid extracts, extracts, aromatic waters, diluted acids, spirits, and radiopharmaceuticals.

There are two appendices: one a list of definitions of selected drug categories and the other a discussion of pharmaceutical systems and measurement techniques. Included throughout are illustrations depicting current methods of manufacture of the various dosage forms.

442. Ashbury, Carolyn H. **Orphan Drugs: Medical Versus Market Value**. Lexington, MA: Lexington Books, 1985. 219p. bibliog. index. LC 84-47648. ISBN 0-669-08389-5.

Orphan drugs is the term used to refer to drugs that are medically important but unprofitable to manufacture for one reason or another. They are usually the only effective treatment for some rare and chronic diseases, and often they are appropriate only for diseases found in developing nations. The drugs seem to have fallen into the cracks of a highly complex system of bringing medicines to those who need them, although there is a new law intended to remedy the problem.

This book examines the development, approval, and distribution of orphan drugs. Also examined is the Congressional rationale for and potential strengths and weaknesses of legislation in the area. In addition, ethical and public policy issues are addressed.

The book should interest policy planners, pharmaceutical manufacturers, and health professionals.

443. Attwood, D., and A. T. Florence. **Surfactant Systems: Their Chemistry, Pharmacy, and Biology**. London, England: Chapman and Hall, 1983. 794p. illus. bibliog. index. \$99.00. ISBN 0-412-14840-4.

Surfactants are widely used in the formulation of pharmaceutical dosage forms such as emulsions and suspensions in solubilization of insoluble drugs. This book updates and expands an earlier book by Peter Elworthy, et al., *Solubilization by Surface-Active Agents* (1968). This comprehensive new work summarizes as well as updates the vast developments in the field that have taken place since 1968. Many literature references have been provided. The authors have placed greater emphasis on quantitative treatment of topics than was evident in the earlier work.

Chapter headings are: (1) Surface activity; (2) Phase behaviour of surfactants; (3) Micellization; (4) Surface activity and colloidal properties of drugs and naturally occurring substances; (5) Solubilization; (6) Pharmaceutical aspects of solubilization; (7) Biological implications of surfactant presence in formulation; (8) Emulsions; (9) Surfactants in suspension systems; (10) Aspects of surfactant toxicity; and (11) Reactivity in surfactant systems.

The book is aimed at the advanced undergraduate student of pharmacy, especially those specializing in pharmaceuticals and pharmaceutical technology; graduate students of pharmacy, biochemistry, and chemistry; and those working in research and development laboratories exploring problems of surfactant systems.

444. Avis, Kenneth E., Leon Lachman, and Herbert A. Lieberman, eds. **Pharmaceutical Dosage Forms: Parenteral Medications**. Volume 1. New York: Marcel Dekker, 1984. 466p. bibliog. index. \$59.75. LC 84-7056. ISBN 0-8247-7084-6.

The unique and distinctive characteristics of parenteral medications and the technology associated with their manufacture are covered in this multiauthored book. It is to be complete in two volumes. The technology involved in producing parenteral drugs has undergone dramatic change of recent years, making this work most welcome.

Volume 1 presents a general discussion of parenteral drugs, their historical development, and the factors associated with their administration. Then follow chapters on biopharmaceutics, preformulation, formulation, and processing of the product. Also included are chapters covering environmental factors in the design and operation of a parenteral manufacturing facility and the personnel factor in clean room operations.

The second volume, to be published later, is to cover material science (glass, rubber, and plastic), packaging, labeling, record keeping, and regulations. In addition, there is to be an extensive treatment of medical devices and consideration of handling parenteral products in hospital practice.

No other work so thoroughly covers parenteral medications. It is said to be of value to industrial and hospital pharmacists, pharmaceutical chemists, pharmacologists, parenteral drug manufacturers, quality control personnel, regulatory officials, biotechnologists, and drug patent attorneys. It may also be used by both graduate and undergraduate students in courses in industrial and hospital pharmacy.

445. Banker, Gilbert S., and Christopher T. Rhodes, eds. **Modern Pharmaceutics**. New York: Marcel Dekker, 1979. 825p. illus. bibliog. index. (Drugs and the Pharmaceutical Sciences, Volume 7). \$85.00. LC 79-18742. ISBN 0-8247-6833-7.

Planned for use by both pharmacy students and practitioners, this book covers the design and evaluation of modern pharmaceutical dosage forms, with emphasis on their quality performance. It is probably the best basic textbook for a two-semester undergraduate course, covering both biopharmaceutics and pharmaceutical technology. Some chapters are suitable for graduate courses. The book is also of value to those concerned with drug products and their quality, whether employed in industry, government service, hospitals, or community practice. Each chapter is written by an expert, some from academic institutions and some from industry.

The book first presents selected basic pharmaceutics, biopharmaceutics, and physical pharmacy principles that influence dosage form design and drug product performance. Following are chapters on drug products organized by routes of administration for the most part. There are, in addition, chapters on the following topics: packaging, appraisal of drug product quality and performance, optimization of techniques in pharmaceutical formulation and processing, relevant food and drug laws, and a view to the future.

446. Banker, Gilbert S., and Robert K. Chalmers, eds. **Pharmaceutics and Pharmacy Practice**. Philadelphia, PA: J. B. Lippincott, 1982. 447p. illus. bibliog. index. \$27.50. LC 81-6073. ISBN 0-397-50483-7.

Although intended as a successor to Sprowls's *Prescription Pharmacy* this undergraduate textbook has a different structure from that work and other texts in the area, which are usually separated into chapters that categorize various classes of drugs and describe their methods of production. This new work has been organized and written according to services rendered by and the needs of the present-day and future practicing pharmacist. It interrelates pharmaceutical and clinical pharmacy knowledge about drugs and their delivery. Emphasized are physicochemical and biologic principles of drug delivery concepts according to various routes of administration.

Each chapter is written by a different author or authors, most of whom hold academic positions in schools of pharmacy. Chapter headings are: (1) Pharmacy as a system in health care delivery; (2) Drug product development and quality evaluation; (3) Physical-chemical principles; (4) Basic concepts in biopharmaceutics; (5) Patient factors that influence dosage form selection; (6) Literature resources for the pharmacy practitioner and their appropriate use; (7) Oral drug-delivery systems for prescription pharmacy; (8) Parenteral drug-delivery systems; (9) Topical drug-delivery systems (skin); (10) Topical drug-delivery systems (eye, ear, nose); (11) Inhalation drug-delivery systems; and (12) Rectal, vaginal, and urethral drug-delivery systems.

447. Barry, Brian W. **Dermatologic Formulations: Percutaneous Absorption**. New York: Marcel Dekker, 1983. 480p. illus. bibliog. index. (Drugs and the Pharmaceutical Sciences, Volume 18). \$55.00. LC 83-5154. ISBN 0-8247-1729-5.

This book focuses on how the physicochemical properties of a drug in a dermatologic formulation affect its percutaneous absorption. The aim in dermatologic biopharmaceutics is to design active drug molecules with selective permeability to be incorporated into vehicles that ensure that the medicament arrives at the intended site at a controlled rate. The book discusses fundamental principles of percutaneous absorption rather than specific examples.

The chapter headings are as follows: (1) Structure, function, diseases, and topical treatment of human skin; (2) Basic principles of diffusion through membranes; (3) Skin transport; (4) Properties that influence percutaneous absorption; (5) Methods for studying percutaneous absorption; (6) Formulation of dermatological vehicles; and (7) Rheology of dermatological vehicles.

The book should be useful to pharmacy students and pharmacists, and much of the information is also relevant to cosmetic and veterinary scientists and investigative dermatologists. In particular, the aim has been to present a general introduction to the subject for scientists involved in developing topical formulations. The book has been well received.

448. Benet, Leslie Z., Neil Massoud, and John G. Gambertoglio, eds. **Pharmacokinetic Basis for Drug Treatment**. New York: Raven Press, 1984. 466p. illus. bibliog. index. \$39.50. LC 83-9512. ISBN 0-89004-874-6.

This multiauthored reference text provides a theoretical and practical guide to the effects of disease on drug disposition and the many patient variables that must be considered in drug therapy. Each chapter summarizes the kinetic parameters and values under normal and abnormal clinical states of a large number of drugs, which are listed alphabetically.

Chapter headings are: (1) Pharmacokinetics; (2) Effects of gastrointestinal disease on drug absorption; (3) Effects of hepatic disease on clinical pharmacokinetics; (4) Drugs and the liver; (5) Pharmacokinetics and drug excretion in bile; (6) Effects of cardiac disease on pharmacokinetics: pathophysiologic considerations; (7) The lungs

and metabolic drug clearance in health and disease; (8) Effects of renal disease: pharmacokinetic considerations; (9) Effects of renal disease: altered pharmacokinetics; (10) Implications of altered plasma protein binding in disease states; (11) Pharmacokinetic drug interactions; (12) Chronopharmacology and further steps toward chronotherapy; (13) Effects of pregnancy on pharmacokinetics; (14) Clinical pharmacokinetics: pediatric considerations; (15) Pharmacokinetic considerations in geriatric patients; (16) Smoking effects in pharmacokinetics; (17) Nonlinear kinetics and theophylline elimination; (18) Drug absorption and disposition in burn patients; (19) Computer-assisted clinical pharmacokinetics; (20) Estimation of altered kinetics in populations; (21) Therapeutic drug monitoring; and (22) Establishing a clinical pharmacokinetics laboratory.

The book has wide appeal. Pharmacists, pharmacologists, and prescribing physicians will find it valuable.

449. Benet, Leslie Z., Gerhard Levy, and Bobbe L. Ferraiolo, eds. **Pharmacokinetics: A Modern View**. New York: Plenum, 1984. 531p. illus. bibliog. index. \$65.00. LC 84-15011. ISBN 0-306-41810-X

This volume presents the Proceedings of the Sidney Riegelman Memorial Symposium, held 22-24 April, 1982 at the University of California, San Francisco. It is intended to serve as a record of the late Professor Riegelman's accomplishments and as a history of his service to his profession and his scientific discipline. Professor Riegelman played a leading role in the developments in the field of pharmacokinetics, and his work also presents a comprehensive survey of the current status of the field and of the likely future directions of research and practice in the discipline.

The book is divided into sections as follows: (1) Sidney Riegelman, the man, his work and his impact; (2) Biopharmaceutics—drug delivery; (3) Pharmacokinetics—concepts, theory and application; (4) Pharmacokinetics and drug metabolism; (5) Pharmacokinetics—drug dosing and drug effects; and (6) Pharmacokinetics and biopharmaceutics of chemotherapeutic and immunosuppressive agents. Each section includes several chapters by various authors. An additional section entitled "Communications" includes 31 short papers that are a few pages each. There is also a bibliography of Professor Riegelman's articles.

450. Bezold, Clement, ed. **Pharmaceuticals in the Year 2000: The Changing Context for Drug R & D**. Alexandria, VA: Institute for Alternative Futures (P.O. Box 1417, Dept. B-42, Alexandria, VA 22313), 1983. 154p. bibliog. index. \$12.00. LC 83-6132.

This book contains papers presented at a conference held 3-4 March, 1982 in Millwood, VA, sponsored by the Institute for Alternative Futures.

It is felt that by the end of the twentieth century the pharmaceutical field will face a greatly altered economic, social, regulatory, and health environment. The papers presented in this book, contributed by representatives of industry and health institutes, the Veterans Administration, journalism, and medical research, address these changes and their implications for the pharmaceutical industry.

The contents of the book are as follows: (1) Pharmaceuticals in the year 2000: an overview, by Clement Bezold; (2) Images of the year 2000: alternative pharmaceutical futures; (3) Health conditions in the year 2000; (4) Research breakthroughs by the year 2000; (5) Government policies and the development of new drugs; (6) The pharmaceutical industry in the year 2000; and (7) Computers, consumers, and pharmaceuticals

Some of the predictions for the future include a slight increase in life expectancy; public sector funding of nursing homes, pharmaceuticals, and other health care needs of the elderly; a minor health impact from genetic engineering; major breakthroughs from research efforts on leading diseases such as cancer and cardiovascular diseases; continued support for orphan drugs; and more efficient premarket clearance of drugs.

451. Block, Seymour S. **Disinfection, Sterilization, and Preservation**. Philadelphia, PA: Lea & Febiger, 1983. 1053p. illus. bibliog. index. \$87.50. LC 82-24002. ISBN 0-8121-0863-9.

The first edition of this book was published in 1968 with Carl Lawrence as the primary author. The author of this edition points out that just when we think we have the upper hand in dealing with microorganisms, along come surprises such as the fatal Legionnaires' disease, which is caused by a previously unrecognized organism. Other problems also have developed such as the resistance of some organisms to antibiotics and new surgical techniques that require sterile conditions. These kinds of problems and their solutions are discussed in this book.

The book contains 51 chapters divided among these parts: (1) Chemical and physical sterilization; (2) Antiseptics and disinfectants (discussed by chemical type and by type of microorganism); (3) Medical and health-related applications; (4) Antimicrobial preservatives and protectants; (5) Mode of action; (6) Miscellaneous topics (including regulation of disinfectants in the United States); and (7) Methods of testing.

This is the largest and most comprehensive book available on the subject. It has become a classic and is used by all who are involved with microbial control in the medical and health areas and those working in microbiology in various industrial settings.

452. Blodinger, Jack, ed. **Formulation of Veterinary Dosage Forms**. New York: Marcel Dekker, 1983. 316p. illus. bibliog. index. \$58.00. (Drugs and the Pharmaceutical Sciences Series, Volume 17). LC 82-22004. ISBN 0-8247-1730-0.

Veterinary pharmacy is a relatively new area of interest to the pharmacist. This volume describes the types of drug formulations administered to animals, the art and science used in their development, and the techniques needed to administer them to ensure optimum efficacy.

Chapter headings are: (1) The basis for selection of the dosage form; (2) Specialized dose dispensing equipment; (3) Formulation of drug dosage forms for animals; (4) Formulation of drugs for administration via feed or drinking water; (5) Stability studies of veterinary formulations; and (6) Regulatory clearance. The last chapter covers the requirements for registration of animal health products in the United States, Australia, Brazil, the European Economic Community, and Japan.

The book fills a previous void in pharmaceutical literature. The primary audience for the text is the veterinary product formulator, but the veterinarian, government liaison administrator, and pharmacy student seeking a career in industry may profit from its use. In addition, pharmacists in rural areas may be interested in it.

453. Bruck, Stephen D., ed. **Controlled Drug Delivery**. Volume 1, **Basic Concepts**; Volume 2, **Clinical Applications**. Boca Raton, FL: CRC Press, 1983. 2 volumes. illus. bibliog. index. About \$90.00 per volume. LC 82-12921. ISBN 0-8493-5181-2; 0-8493-5182-0.

About 20 authors from various disciplines such as materials science, pharmacology, and medicine have in this book covered a variety of subjects related to controlled drug delivery. The term "controlled drug delivery" refers to the control of the release or, more specifically, the control of release rate of drugs from the dosage form. Ideally, of course, the drug should be released at a near-constant rate.

Chapter headings in Volume 1 are: (1) Pharmacological basis of controlled drug delivery; (2) Transport of small molecules in polymers; (3) Biodegradation of polymers; (4) Enzymatically degradable bonds in synthetic polymers; (5) Molecular encapsulation of drugs by cyclodextrins and congeners; and (6) Ionic polymers as drug carriers. Volume 2 presents these chapters: (1) Acute and chronic evaluations of implanted polymeric materials; (2) Evaluation of blood compatibility of polymeric implants; (3) Drug delivery systems based on diffusion and osmosis; (4) Ocular pharmacology of drug release devices; (5) Artificial devices for insulin infusion in the treatment of patients with diabetes; (6) Therapeutic and diagnostic applications of latex-bound immunoglobulins; and (7) Encapsulated drugs in targeted cancer therapy.

Some reviewers feel that the volumes do not provide a very broad spectrum of the state of the art in controlled drug delivery but that they do contain valuable material not found in other books.

454. Bryant, Rhys. **The Pharmaceutical Quality Control Handbook**. Springfield, OR: Aster Publishing Corporation, 1984. 212p. bibliog. index. \$45.00; \$38.00pa. LC 83-25776. ISBN 0-943330-04-1pa.

The author of this work, who holds a position in the pharmaceutical industry, has addressed his book to both management and scientific and technical personnel. He believes he has presented a standardized quality control system for pharmaceutical manufacturing flexible enough for use by most plant facilities. Bryant feels that many pharmaceutical executives do not understand quality control, even though there has been a resurgence of interest in the quality of products in the United States of recent years. He attributes this lack of understanding in part to the fact that there have been no readily available texts on the subject to consult.

The book contains 18 chapters arranged under these general headings: (1) Principles and practice; (2) Procedures and documentation; (3) Quality control management; (4) Multiplant and multinational operations; and (5) Practical and regulatory concerns.

Included are chapters on continuous versus batch product processes; new drug development; quality control of animal drugs, antibiotics, biologics, bulk chemicals, controlled drugs, cosmetics, devices, foods, sterile products, and over-the-counter and prescription drugs; packaging methods; Good Manufacturing Practice regulations; and the federal Food, Drug and Cosmetic Act.

455. Cadwallader, Donald E. **Biopharmaceutics and Drug Interactions**. 3rd ed. New York: Raven Press, 1983. 151p. illus. bibliog. index. \$16.50pa. LC 83-3278. ISBN 0-09004-704-9.

A readable work, this book is described as a primer for students in the health care professions. Health care practitioners who require an introduction to the subjects considered also have found it of value. A great deal of information presented is in graphic and diagrammatic form.

The book begins with a definition of biopharmaceutics and reviews the hazards of drug interactions. The next chapters (about two thirds of the book) deal with

biopharmaceutics and describe the factors that can influence bioavailability. The remainder of the work covers drug interactions in these chapters: (1) Terminology associated with drug interactions; (2) Drug interactions in the gastrointestinal tract; (3) Drug interactions during transport; (4) Drug interactions associated with metabolism; (5) Drug interactions at the receptor site; and (6) Drug interactions associated with renal excretion.

The book has been reasonably well received, although a number of useful books on these subjects were published at about the same time. One reviewer mentioned that the final chapters on drug interactions seem somewhat unconnected to the rest of the book.

456. Chien, Yie W. **Novel Drug Delivery Systems: Fundamentals, Developmental Concepts, Biomedical Assessments**. With the assistance of Bernard E. Cabana and Stanley E. Mares. New York: Marcel Dekker, 1982. 633p. illus. bibliog. index. (Drugs and the Pharmaceutical Sciences, Volume 14). \$65.00. LC 82-4684. ISBN 0-8247-1831-3.

Chien discusses the theory, development, and applications of the recent and rapidly changing technology of dosage forms that provide controlled and prolonged release of therapeutic agents. The emphasis of the work is on drug delivery devices made of polymeric materials.

A chapter is devoted to each of the following routes of administration of drugs: ocular, intravaginal, intrauterine, transdermal, parenteral, and subcutaneous implantation. The remaining chapters discuss veterinary medicine applications, fundamentals of controlled-release administration, and regulatory considerations in controlled-release medication. The chapters that deal with the route of drug administration usually include historical development, an overview of anatomy and physiology, a description of physical and pharmacokinetic principles of drug release, and examples of the clinical performance of several different drugs. The index is quite complete, making the book suitable for reference. The text is amply illustrated with tables, graphs, and illustrations.

The work is intended primarily for industrial researchers but is also suitable for use as a reference work for a graduate course in drug delivery systems.

457. Clark, Bruce, and Dennis A. Smith. **An Introduction to Pharmacokinetics**. Oxford, England: Blackwell Scientific Publications, 1981. 75p. illus. bibliog. £2.50pa. ISBN 0-632-00743-5.

This pocket-sized book for the complete beginner has been well received. It deals with the most elementary concepts of pharmacokinetics, answering questions a reader may be embarrassed to ask. The presentation of the mathematical material enables the reader with a minimum knowledge of mathematics to understand it.

The intended audience includes physicians, pharmacists, medical and pharmacy students, and perhaps biochemists and biologists concerned with drugs.

458. Curry, Stephen H., and Robin Whelpton. **Manual of Laboratory Pharmacokinetics**. New York: John Wiley & Sons, 1983. 188p. bibliog. index. \$21.95. LC 82-2643. ISBN 0-471-10247-4.

The work is entitled "Experiments in biopharmaceutics, biochemical pharmacology, and pharmacokinetics, with a consideration of relevant instrumental and chromatographic techniques." The authors state that their objective has been to produce a compilation of experiments suitable for a variety of individuals on several

levels, including technicians, undergraduate and graduate students, professors, scientists, and even Nobel prizewinners. They feel that there has been an unfortunate trend toward the elimination of laboratory work in undergraduate courses and hope that their book will assist in improving the abilities of those who undertake postgraduate studies.

Although brief, the book provides a wide range of reliable experiments in "cookbook" fashion, after first discussing the topic under consideration. The chapter headings are: (1) Introduction to instrumental and chromatographic techniques; (2) Assay of drug concentrations in biological fluids; (3) Physicochemical properties of drugs and dosage forms; (4) Stability and storage; (5) Absorption; (6) Binding to plasma protein; (7) Drug metabolism; (8) Excretion; (9) Drug disposition in whole animals, including humans; (10) Pharmacokinetics of turnover studies; and (11) Models in pharmacokinetics. Appendices include "Laboratory Facilities and Sources of Special Chemicals" and a section of answers to the modeling problems found throughout the text.

The manual has a different approach than other texts on pharmacokinetics, and it has been quite well received.

459. Deasy, Patrick B. **Microencapsulation and Related Drug Processes**. New York: Marcel Dekker, 1984. 361p. illus. bibliog. index. (Drugs and the Pharmaceutical Sciences, Volume 20). \$75.00. LC 83-26267. ISBN 0-8247-7162-1.

Various controlled-release dosage forms have been used, but microencapsulation is now the most frequently employed method of obtaining controlled release. There has been a great deal of progress made in the past 20 years in the technology used to produce such drugs. Deasy's book defines criteria for drug selection for microencapsulation, provides a review of the techniques used, and discusses the mechanism of drug release from such products.

The following chapters provide a rather comprehensive coverage of the subject: (1) General introduction; (2) Core and coating properties; (3) Coacervation-phase separation procedures using aqueous vehicles; (4) Coacervation-phase separation procedures using nonaqueous vehicles; (5) Interfacial polycondensation; (6) Pan coating; (7) Air suspension coating; (8) Spray drying, spray congealing, spray embedding, and spray polycondensation; (9) Polymerization procedures for nonbiodegradable micro- and nanocapsules and particles; (10) Polymerization procedures for biodegradable micro- and nanocapsules and particles; (11) Ion-exchange resins; (12) Congealable dispersephase encapsulation procedures; (13) Miscellaneous other methods of encapsulation and entrapment; and (14) Release of drug from microcapsules and microparticles. Many literature references are included with each chapter.

The book is suitable for advanced students in pharmaceutics and pharmacy courses and those involved with pharmaceutical manufacturing.

460. Evans, William E., Jerome J. Schentag, and William J. Jusko, eds. **Applied Pharmacokinetics: Principles of Therapeutic Drug Monitoring**. San Francisco, CA: Applied Therapeutics, 1980. 708p. bibliog. index. \$34.00. LC 80-53408. ISBN 0-915486-03-2.

The ultimate goal of this textbook is said to be to improve patient care by improving the quality and application of pharmacokinetic principles in clinical practice. It focuses on the concept of therapeutic drug concentrations, correlating them in

biologic fluids to therapeutic or toxic effects and also evaluating the influences of diseases, concurrent drug therapy, and altered organ functions on the metabolism, disposition, and bioavailability of commonly prescribed medications. The book is unique in that it deals less with the mathematical basis of pharmacokinetics and more with the principles governing its translation into improved patient care.

The scope of the work is limited to those drugs that are commonly monitored by pharmacokinetic methods: theophylline, aminoglycosides, cephalosporins, phenytoin, digoxin, lidocaine, procainamide, quinidine, propranolol, salicylates, methotrexate, tricyclic antidepressants, lithium, and heparin. Chapters on each of these drugs or group of drugs is presented, and in some cases (where a consensus of opinion does not exist) "counterpoint" chapters are also included to reflect the current positions of several investigators. Other chapters included discuss applied pharmacokinetics—a prospectus; clinical pharmacokinetics consultation services; influence of renal disease on pharmacokinetics; neonatal pharmacokinetics; and guidelines for collection of pharmacokinetic analysis of drug disposition data.

461. Florence, A. T., and D. Attwood. **Physicochemical Principles of Pharmacy**. London, England: Macmillan Press, 1981. 509p. illus. bibliog. index. \$29.95. ISBN 0-333-234049. (Also published in 1982 by Chapman and Hall, New York. ISBN 0-412-00131-4.).

Designed for students of pharmacy and other life sciences, this text provides a physicochemical background to the design and use of pharmaceutical products and to the mechanisms of drug action. It is not a textbook of physical chemistry for pharmacists, but rather a book that will bridge the gap between the first basic physical chemistry course taught and the more applied aspects taught in later courses. An attempt is made to relate the physical chemistry of the drug or drug system to clinical usage.

Following are the chapter headings: (1) Bases; (2) Properties of the solid state; (3) Liquids; (4) Solutions; (5) Solubility of drugs in liquids; (6) Surface chemistry; (7) Colloidal and coarse lyophobic dispersions; (8) Polymeric systems; (9) Principles of drug absorption and routes of administration; (10) Drug interactions and incompatibilities: a physicochemical viewpoint; and (11) Chemical stability of drugs.

462. Gereffi, Gary. **The Pharmaceutical Industry and Dependency in the Third World**. Princeton, NJ: Princeton University Press, 1983. 291p. bibliog. index. \$25.00; \$9.95pa. LC 83-42560. ISBN 0-691-09401-2; 0-691-02828-1pa.

The poverty of underdeveloped countries has frequently been a subject of interest to social scientists of the United States. The usual explanations for Third World problems focus on such matters as shortage of skilled labor, absence of entrepreneurship, inadequate capital, corrupt political institutions, and small local markets. The author of this work, however, has another explanation for underdevelopment, that is, dependency. His thesis is that the developed nations, particularly the United States, are to blame. He thinks nationalization of foreign-dominated industries (in this case the pharmaceutical industry) in Third World countries is the answer to the problem.

Gereffi uses the story of the steroid industry in Mexico to illustrate his views. The first part of the book takes up the dependency theory and Third World development. The second part of the book relates the story of how the Syntex Corporation was established in Mexico in 1944 and how it was well on the way to becoming the first

transnational pharmaceutical company in a Third World country. However, the company was moved to the United States around 1960. The third part of the book, a long chapter, discusses transnational drug firms and the state in some other Third World countries.

The book is difficult reading, although well written, and it tells the Syntex story well. However, competent scientific reviewers have been critical of the book for several reasons. They feel Gereffi is naive in his conclusions and that he has oversimplified the problems of the Third World. Also, he is said to have made many errors when discussing the chemistry of the drugs.

For good authoritative reviews of the book see the following: *Chemical and Engineering News*, Vol. 62, April 30, 1984, pp. 79-80; *Nature*, Vol. 310, August 9, 1984, pp. 517-518; and *Science*, Vol. 224, May 18, 1984, pp. 711-712.

463. Gibaldi, Milo. **Biopharmaceutics and Clinical Pharmacokinetics**. 3rd ed. Philadelphia, PA: Lea & Febiger, 1984. 330p. illus. bibliog. index. \$22.50. LC 83-13593. ISBN 0-8121-0896-5.

Gibaldi defines biopharmaceutics as a major branch of the pharmaceutical sciences concerned with the relationship between the physicochemical properties of a drug in a dosage form and the pharmacologic, toxicologic, or clinical response observed after its administration. He further remarks that the study of biopharmaceutics has been extended beyond that of a descriptive discipline by the development of pharmacokinetics, which concerns the study and characterization of the time course of drug absorption, distribution, metabolism, and excretion, as well as the relationship of these processes to the intensity and time course of therapeutic and adverse effects of drugs. Gibaldi's textbook has been popular; the successive editions have gone through several printings and have been translated into Spanish, Japanese, and Turkish.

Chapter headings are: (1) Introduction to pharmacokinetics; (2) Noncompartmental pharmacokinetics; (3) Gastrointestinal absorption—biologic considerations; (4) Gastrointestinal absorption—physicochemical considerations; (5) Gastrointestinal absorption—role of the dosage form; (6) Nonoral medication; (7) Prolonged-release medication; (8) Bioavailability; (9) Drug concentrations and clinical response; (10) Drug disposition—distribution; (11) Drug disposition—elimination; (12) Pharmacokinetic variability—body weight, age, sex, and genetic factors; (13) Pharmacokinetic variability—disease; (14) Pharmacokinetic variability—drug interactions; and (15) Individualization and optimization of drug dosing regimens.

The book is most suitable for use as a textbook for undergraduate pharmacy students, but it also can serve as a supplementary work for the graduate student and will interest clinical pharmacologists because of the close relationship shown among the areas of physiology, biopharmaceutics, pharmacokinetics, and therapeutics.

464. Gibaldi, Milo, and Laurie Prescott, eds. **Handbook of Clinical Pharmacokinetics**. New York: ADIS Health Science Press, 1983. 1184p. \$89.50. ISBN 0-86792-004-1.

The title of this thick book is misleading. It is not a handbook in the usual sense of the word. It is composed of more than 60 selected articles from the journal *Clinical Pharmacokinetics* (see entry 763) from 1976 to early 1981. The selections are said to be classic review articles updated for this work. The editors say the book can be used by "all whose work is directed towards better drug therapy, and in particular to teachers, students, and those on the 'front line' who are directly involved in the prescribing of drugs."

The material is presented in four sections (each paged separately and thumb indexed): (1) Pharmacokinetic concepts; (2) Physiological and environmental determinants of drug disposition; (3) Effect of disease states on drug disposition; and (4) Therapeutic drug monitoring and dosage prediction.

Although the material of the book is undoubtedly valuable, written as it is by acknowledged leaders of the field with many literature references included, the book has some obvious weaknesses. The selections included are all from one journal, leading to gaps in information. There is no index, and the contents pages do not list page numbers, making it very difficult to find specific information.

The book will be of most value to libraries who do not have the journal *Clinical Pharmacokinetics*.

465. Gibaldi, Milo, and Donald Perrier. **Pharmacokinetics**. 2nd ed. Rev. and enl. New York: Marcel Dekker, 1982. 494p. bibliog. index. (Drugs and the Pharmaceutical Sciences, Volume 15). \$34.50. LC 82-4608. ISBN 0-8247-1042-8.

Pharmacokinetics is defined as "the study of the time course of drug absorption, distribution, metabolism, and excretion. It also concerns the relationship of these processes to the intensity and time course of pharmacologic (therapeutic and toxicologic) effects of drugs and chemicals. Pharmacokinetics is a quantitative study that requires a preexisting competence in mathematics at least through calculus. It is also a biologic study and can be very useful to the biomedical scientist. . . . It has become increasingly important in the design and development of new drugs and in the reassessment of old drugs." The discipline of pharmacokinetics has become a well-established one.

The first edition of this book, which appeared in 1975, was well accepted, and the work is now considered a classic. The second edition has been expanded considerably. Eleven chapters and eight appendices are presented: (1) One-compartment model; (2) Multicompartment models; (3) Multiple dosing; (4) Absorption kinetics and bioavailability; (5) Apparent volume of distribution; (6) Kinetics of pharmacologic response; (7) Nonlinear pharmacokinetics; (8) Clearance concepts; (9) Physiologic pharmacokinetic models; (10) Application of pharmacokinetic principles; and (11) Noncompartmental analysis based on statistical moments. The appendices are: (1) Method of Laplace transforms; (2) Method for solving linear mammillary models; (3) Method of residuals; (4) Estimation of areas; (5) Prediction of drug concentrations on multiple dosing using the principle of superposition; (6) Estimation of rates; (7) Selective derivations; and (8) Computer programs.

The intended audience for the book is the graduate student, who might use it as a text in pharmacokinetics and biopharmaceutics. It is also suitable for the biomedical scientist in such areas as drug metabolism, pharmaceuticals, clinical pharmacology, and toxicology.

466. Goldberg, E. P., ed. **Targeted Drugs**. New York: John Wiley & Sons, 1983. 296p. illus. bibliog. index. (Polymers in Biology and Medicine, Volume 2). \$55.00. ISBN 0-471-04884-4.

The purpose of drug targeting is to reduce toxic side effects and increase the therapeutic efficacy of the drug. This is especially necessary in cancer chemotherapy.

This book is a collection of ten essays covering a variety of targeting, including: (1) hormone receptor targeting; (2) cell membrane-polymer interaction; (3) various neural

and ionic soluble polymeric drug carriers; (4) drug-containing microspheres and blood cells; and (5) tissue-binding polymeric drugs. Physical targeting by magnetic guidance and direct injection also are covered. The book covers principles and theory, synthesis, specificity, in vitro and in vivo models, and clinical applications. The material was written by leading experts in the field.

The book has been recommended for those in the physical, medical, and biologic sciences who are interested in novel drug-delivery systems. It is an important work, covering a wide spectrum of concepts in an increasingly important research area.

467. Gross, Franz, ed. **Decision Making in Drug Research**. With the assistance of T. B. Binns and Susi R. Naegeli. New York: Raven Press, 1983. 244p. illus. bibliog. index. \$34.00. LC 83-11210. ISBN 0-89004-944-0.

This volume presents the proceedings of a symposium sponsored by the Smith Kline Foundation, Milan, in 1982. Experts in pharmaceutical research from industry, government, and academia were involved, and many of the contributors to the volume are in charge of research in pharmaceutical industries, particularly in Europe. The decisions that enter into the planning of drug research are defined, as are realistic criteria for decision making. The book identifies the problems inherent in current industrial pharmaceutical research.

The papers are arranged under these headings: (1) Objectives for research and development in drug industry; (2) Criteria for selecting areas for drug research; (3) Criteria for setting priorities of projects; (4) External factors influencing decision making; (5) Organization of industrial drug research; (6) Decision steps within a research project; (7) Cost of research; and (8) Management problems in drug research.

The editor states at the outset that despite rapidly increasing research investments the pace of discoveries has slowed, and drug innovations are rare. He lists some possible reasons for this. In addition, he points out that advances in clinical medicine are not comparable with those in the biologic sciences. Nevertheless, he thinks we are at the dawn of exploiting the results of biologic advancement, and points to the contributions possible through biotechnology and the insights made possible from the study of molecular biochemistry.

The book should interest not only those in the pharmaceutical industry, but also those involved in studying, dispensing, and administering drugs.

468. Gueriguian, John L., Edwin D. Bransome, Jr., and Aubrey S. Outschoorn, eds. **Hormone Drugs**. Proceedings of the FDA-USP Workshop on Drug and Reference Standards for Insulins, Somatropins, and Thyroid-Axis Hormones, held at the National Institutes of Health, Bethesda, MD, 19-21 May, 1982. Rockville, MD: United States Pharmaceutical Convention, 1982. 584p. illus. bibliog. \$49.00.

Presented here are the papers of a workshop sponsored by the U.S. Food and Drug Administration and the United States Pharmacopeial Convention. Leading international experts presented state-of-the-art information and discussed progress, opinions, and prospects in the three areas of interest. The book is a companion volume to *Pharmacopeial Forum* (entry 905), a periodical publication of the U.S. Pharmacopeial Convention, which provides details of drug standards development and official compendia revisions.

The general goal of the workshop was to stimulate progress on public standards for pharmaceutical hormones. More specific goals of the workshop from the USP perspective were: (1) To establish achievable standards and tests of strength, quality,

purity, packaging, and labeling for these drugs; (2) To define and arrange for any Reference Standard material that might be necessary in the performance of written tests; and (3) To write drug use information for physicians and pharmacists and their patients in the *USP Dispensing Information* publications (entries 357 and 358). The objectives from the FDA perspective were: (1) To update and modify the chemical and manufacturing specifications and the compendial monograph of bovine and porcine insulin; (2) To revise the definition of all synthetic and natural thyroid hormone preparations; (3) To develop monographs for thyroid-releasing hormone and some other drugs for which no current monographs exist; and (4) To study and resolve problems presented by human insulins of either microbial or porcine origin, and methionyl-hGH.

The material presented in the papers is mainly analytic assay information and physicochemical properties of hormone drugs. The book is of most value to those interested in scientific research on these drugs and to those engaged in manufacture, regulatory affairs, and registration and control of the drugs.

469. Hamner, Charles E., ed. **Drug Development**. Boca Raton, FL: CRC Press, 1982. 254p. bibliog. index. \$74.50. LC 81-38446. ISBN 0-8493-6310-1.

Written by experts in the various phases of drug development, this volume traces the complex process of taking a drug from its discovery to a useful marketed product. Scientific, regulatory, testing, business, legal, and marketing aspects are all treated.

Chapter titles are: (1) Introduction; (2) Project selection factors in pharmaceutical R & D; (3) Program coordination and management; (4) The statistician in pharmaceutical development; (5) A practical approach to project cost monitoring; (6) Drug design; (7) Approaches to screening compounds for pharmacological activity; (8) Toxicology; (9) Pharmaceutical development from concept to market; (10) Selection of chemical entities for clinical studies; (11) Notice of claimed investigational exemption for a new drug; (12) Biopharmaceutic and pharmacokinetic studies; (13) Managing and conducting Phase I and Phase II studies; (14) Conducting Phase III and Phase IV clinical studies; (15) Monitoring contracted clinical studies; (16) Preparing the New Drug Application; (17) Legal aspects of product protection; and (18) Global considerations in the development and production of pharmaceuticals.

The preface to the book is noteworthy. The author, Leland Baker, is highly critical of the "regulatory quagmire" that awaits the sponsor of a New Drug Application. He speaks of "mountains of data" that must be generated to support an application. He further says he is alarmed because the new generation of scientists are conditioned to accept a high level of bureaucratic zealotry as the proper and acceptable way to assure protection of the public.

The book should prove valuable to those responsible for and those working in pharmaceutical research and development and to students and teachers of pharmaceutical manufacturing.

470. Hanson, William A. **Handbook of Dissolution Testing**. Springfield, OR: Pharmaceutical Technology Publications (320 North A Street, Springfield, OR 97477), 1982. 163p. illus. bibliog. index. \$26.50pa. LC 82-81536. ISBN 0-943330-00-9.

The author of this handbook, an engineer, is an authority in the field of dissolution testing. A wide range of both official compendial and unofficial methods are described, following an account of the theoretical background to dissolution rates measurements and a description of the development and use of the dissolution test as a measure of the

pharmaceutical quality of solid dosage forms. The author's engineering background is evident throughout the work; design and performance of equipment are stressed. Emphasis is also given to procedural details, practical solutions, and controlling variables. The last chapter is on automation of dissolution testing.

471. Hugo, W. B., and A. D. Russell, eds. **Pharmaceutical Microbiology**. 3rd ed. Oxford, England: Blackwell Scientific Publications, 1983. 470p. illus. bibliog. index. \$29.00pa. ISBN 0-632-01048-7.

The editors of this text define pharmaceutical microbiology as that part of microbiology which has a special bearing on pharmacy in all its aspects, ranging from manufacture and quality control of pharmaceutical products to an understanding of the mode of action of antibiotics. The intended audience for the book includes undergraduate pharmacy students and microbiologists entering the pharmaceutical industry.

The presentation is in three main parts: (1) Biology of microorganisms; (2) Antimicrobial agents; and (3) Microbiological aspects of pharmaceutical processing. Chapter headings are: (1) Bacteria; (2) Moulds and yeasts; (3) Viruses; (4) Types of antibiotics and synthetic antimicrobial agents; (5) Manufacture of antibiotics; (6) Assessment of a new antibiotic; (7) Principles of methods of assaying antibiotics; (8) Mechanisms of action of antibiotics; (9) Bacterial resistance to antibiotics; (10) Chemical disinfectants, antiseptics and preservatives; (11) Evaluation of non-antibiotic antimicrobial agents; (12) Mode of action of non-antibiotic antibacterial agents; (13) Resistance to non-antibiotic antimicrobial agents; (14) Fundamentals of immunology; (15) Manufacture of immunological products and their quality control; (16) Ecology of microorganisms as it affects the pharmaceutical industry; (17) Microbial spoilage and preservation of pharmaceutical products; (18) Contamination of non-sterile pharmaceuticals in hospital and community environments; (19) Principles of sterilization; (20) Sterile pharmaceutical products; (21) Factory and hospital hygiene and Good Manufacturing Practice; (22) Sterilisation control and sterility testing; (23) Pharmaceutical products of microbial origin; and (24) Production of therapeutically useful substances by recombinant DNA technology.

472. Karch, Fred E., ed. **Orphan Drugs**. New York: Marcel Dekker, 1982. 210p. illus. bibliog. index. (Drugs and the Pharmaceutical Sciences, Volume 13). \$49.50. LC 82-5141. ISBN 0-8247-1681-7.

Orphan drugs are those that are useful in diseases that are relatively rare, but which, for various reasons, have not been made commercially available. A number of circumstances have been blamed for this unfortunate situation, including bureaucratic red tape, the cost of development, patent laws, liability, and failure of the Food and Drug Administration to approve the drugs.

This book presents highly personalized accounts by scientists who have been intimately involved with the development of orphan drugs. Their struggles to gain adoption for the drugs are told. The complexities of the system that seems to inhibit progress in this regard are described, and suggestions are made on how the problem could be solved. The presentation is in four sections: (1) The problem; (2) The orphans; (3) The agencies; and (4) The future. The six drugs or drug classes considered are: L-5-hydroxytryptophan, carnitine, triethylene tetramine dihydrochloride, alkylating local anesthetics, benzolamide, and dopamine.

Detailed scientific information is not included, and the book is suitable for the public as well as for health professionals and researchers. It is noteworthy that since the book was written the Orphan Drug Act became law in the United States (in January 1983).

473. Lachman, Leon, Herbert A. Lieberman, and Joseph L. Kanig. **The Theory and Practice of Industrial Pharmacy**. 2nd ed. Philadelphia, PA: Lea & Febiger, 1976. 787p. illus. bibliog. index. LC 75-43806. ISBN 0-8121-0532-X.

The first edition of this book was the first work that treated industrial pharmacy comprehensively. It is intended mainly as a teaching text for undergraduate and graduate students in the pharmaceutical sciences and also as a comprehensive reference source on modern industrial pharmacy. As such it is valuable to a number of groups: practitioners in the pharmaceutical sciences, hospital pharmacists, drug patent attorneys, governmental scientists and regulatory personnel, allied health scientists, and anyone seeking information on the design, manufacture, and control of dosage forms and government regulations pertaining to drug manufacture.

The first chapters are concerned with the theoretical concepts needed to approach dosage form design on a scientific basis. The next chapters discuss specific dosage forms. The last group of chapters explain pilot plant operations, production management, packaging materials science, quality control, and drug regulatory affairs.

A revised edition of the work is said to be in preparation.

474. Langer, Robert S., and Donald L. Wise, eds. **Medical Applications of Controlled Release**. Volume 1, **Classes of Systems**; Volume 2, **Applications and Evaluation**. Boca Raton, FL: CRC Press, 1984. 2 volumes. illus. bibliog. index. \$102.00 (Volume 1); \$92.00 (Volume 2). LC 83-26132. ISBN 0-8493-5405-6; 0-8493-5406-4.

Increasing attention is being paid to methods for giving drugs continuously for prolonged periods in a controlled fashion. The primary methods of accomplishing this controlled release have been through incorporating the drugs within polymers. This book reviews the medical applications of controlled release.

The first volume is intended as a handbook on the design, fabrication, methods of controlling release, and theoretical considerations of various classes of drug-delivery systems. Included are discussions of matrices, membrane-controlled reservoir systems, bioerodible systems, pendant chain systems, and implantable pumps. In addition, two chapters cover the application of these systems for oral and transdermal delivery.

The second volume is divided into two parts. The first part covers various areas of medical usage of controlled-release polymers. Each covers a particular area of interest: contraception, ocular, surface thrombosis, narcotic addiction, dental applications, cancer, veterinary applications, and miscellaneous applications. The second part presents two chapters, one on mathematical models for controlled-release kinetics, and the other on pharmacokinetic modeling and bioavailability. In addition, the first chapter of Volume 2 is an overview of the past, present, and future of pharmaceutical applications of controlled release.

475. Lieberman, Herbert A., and Leon Lachman, eds. **Pharmaceutical Dosage Forms, Tablets**. Volumes 1-3. New York: Marcel Dekker, 1980-1982. 3 volumes. illus. bibliog. index. \$59.75 per volume. LC 80-12751. ISBN 0-8247-6918-X (Volume 1).

Although tablets are the most widely used dosage form in medicine, this is the first comprehensive work on the subject. Each tablet form requires special formulation

techniques; therefore, the authors of the chapters were chosen because of their expertise in a particular form. The first of the three volumes discusses the various solid dosage forms; the second volume is concerned with the processes involved in producing tablets, bioavailability, and pharmacokinetics; and the third volume covers additional processes in tablet production, as well as sustained drug release, stability-kinetics, automation, pilot plants, and quality assurance.

Each chapter begins with a basic introduction followed by more advanced and specific information. Each topic is illustrated with charts, graphs, and tables.

The work was designed as both a text for graduate and undergraduate students and as a reference source. In addition, industrial pharmacists in the areas of product development, quality control, and production and possibly hospital, government, and regulatory pharmacists will find it useful.

476. Martin, Alfred, James Swarbrick, and Arthur Cammarata. **Physical Pharmacy: Physical Chemical Principles in the Pharmaceutical Sciences**. With illustrations by A. H. C. Chun. 3rd ed. Philadelphia, PA: Lea & Febiger, 1983. 664p. illus. bibliog. index. \$42.50. LC 82-22872. ISBN 0-8121-0877-9.

The publishers of *Physical Pharmacy* say it is one of the most successful books they publish. The first edition appeared in 1960, the second in 1969. Important changes have taken place since then. For instance, an understanding of drug dissolution has become important because this is often the first step in the bioabsorption of drugs following their administration. Diffusion, a process that all neutral and ionized molecules must undergo to reach their sites of action, has been recognized as significant. Polymers, particularly those of high molecular weight, are used in the development of new devices that deliver drugs to the body at preprogrammed rates. Chapters covering these areas have been added to this edition.

Contents of the book are as follows: (1) Physical and mathematical fundamentals; (2) Introductory calculus; (3) Atomic and molecular structure; (4) States of matter and phase equilibria; (5) Thermodynamics; (6) Physical properties of drug molecules; (7) Solutions of nonelectrolytes; (8) Solutions of electrolytes; (9) Ionic equilibria; (10) Buffered and isotonic solutions; (11) Electromotive force and oxidation-reduction; (12) Solubility and distribution phenomena; (13) Complexation and protein binding; (14) Kinetics; (15) Diffusion and dissolution; (16) Interfacial phenomena; (17) Colloids; (18) Micromeritics; (19) Rheology; (20) Coarse dispersions; (21) Physical pharmacy and drug product design; and (22) Polymer sciences.

Although intended primarily as a textbook for undergraduate pharmacy students, graduate students, teachers, practicing pharmacists, and researchers also use it.

477. Matoren, G. M., ed. **The Clinical Research Process in the Pharmaceutical Industry**. New York: Marcel Dekker, 1984. 549p. bibliog. index. (Drugs and the Pharmaceutical Sciences Series, Volume 19). \$59.75. ISBN 0-8247-1914-X.

This collection of 27 monographs by various contributors covers pertinent aspects of industrial pharmaceutical research and development. The goal of the book is said to be to "look at the sequence of events leading to the development of new therapeutic agents . . . intertwined by the philosophical, economic, political, historical, regulatory planning, and marketing aspects of the clinical research process." Light is thrown on what is called "pharmogenology," the industrial new drug development process.

Each chapter of the book presents a step in the path through which a new drug must pass on its way to new drug application submission. There are also specialized

chapters dealing with matters that form the background for the drug development process, including legal and ethical problems in clinical research; the monitoring process; research quality assurance; the role of contract research organizations; the impact of the pharmaceutical industry on health care; and career opportunities in industrial clinical research.

The book is of value to clinical investigators, pharmacologists, drug development scientists, clinical pharmacists, research directors, and drug regulatory personnel.

478. Mungall, Dennis R., ed. **Applied Clinical Pharmacokinetics**. New York: Raven Press, 1983. 448p. illus. bibliog. index. \$49.50. LC 83-565. ISBN 0-89004-727-8.

A compilation of information related to therapeutic drug monitoring, this textbook is intended to offer students and clinicians in pharmacy, medicine, pharmacology, and clinical chemistry a practical guide to clinical pharmacokinetics. Many real-life sample problems are included to provide students with an understanding of what is involved. First, broad theoretical background material is presented, then specific therapeutic agents are covered.

Chapter headings are: (1) Pharmacokinetics: an introduction; (2) Protein binding and free drug concentrations; (3) Procainamide; (4) Quinidine; (5) Digoxin; (6) Anticonvulsants; (7) Theophylline; (8) Improved aminoglycoside therapy: clinical application of pharmacokinetic principles; (9) Warfarin; (10) Antihypertensives; (11) Lithium; (12) The tricyclic antidepressants; (13) Benzodiazepine anxiolytics; (14) Salicylates and nonsteroidal anti-inflammatory drugs; (15) Pharmacokinetics and monitoring techniques for antineoplastic agents; (16) Creatine clearance; (17) Pediatric pharmacokinetics; and (18) The use of programmable calculators in clinical pharmacokinetics.

Undergraduate students who use this book will first need a basic course in pharmacokinetics. As well as being a good textbook, the work has value as a reference source, although some reviewers claim that certain areas have been omitted.

479. Niazi, Sarfaraz. **Textbook of Biopharmaceutics and Clinical Pharmacokinetics**. New York: Appleton-Century-Crofts, 1979. 332p. illus. bibliog. index. \$22.00. LC 79-10869. ISBN 0-8385-8868-9.

The author of this text points out that the study of the subjects covered in this book has become an essential part of various health education curricula. These disciplines provide insight into the selection of the proper dosage form, route of administration, and dosage regimen for successful drug therapy. The book is intended for the undergraduate student in pharmacy and other health-related fields. The main purpose is to familiarize the student with the basic principles of biopharmaceutics and pharmacokinetics and their clinical applications.

These chapters are presented: (1) Introduction to biopharmaceutics and clinical pharmacokinetics; (2) Delivery of drugs: introduction and formulation factors; (3) Delivery of drugs: dosage forms and their evaluation; (4) Delivery of drugs: routes of administration; (5) The distribution of drugs; (6) The termination of drug action; (7) Pharmacokinetic principles; (8) The pharmacokinetic basis of variability in clinical response; (9) The clinical pharmacokinetic basis of drug therapy. Appendices include a section of definitions of scientific terms, a glossary of mathematical terms, and some mathematical and computational aids.

480. Nixon, J. R., ed. **Microencapsulation**. New York: Marcel Dekker, 1976. 215p. illus. bibliog. index. (Drugs and the Pharmaceutical Sciences, Volume 3). \$19.50. LC 75-37112. ISBN 0-8247-6338-6.

There is considerable interest in microencapsulation today, and it has wide-ranging applications. The papers included in this volume were presented at a symposium on the subject. There are pure research papers, applied research papers, and reviews. Reviews of techniques of microencapsulation are included, as well as reviews of commercial techniques and usages.

Titles of the papers include: (1) Microencapsulation by coacervation, spray encapsulation, and nanoencapsulation; (2) Microencapsulation techniques of Fuji Film Co., Ltd. and their applications; (3) In vitro assessment of microencapsulated drug systems and sustained-release parenteral dosage forms; (4) Semipermeable microcapsules as artificial cells: clinical applications and perspectives; (5) Enzyme inactivation in microencapsulation; (6) Prospects for the use of microcapsules as food particles for marine particulate feeders; (7) New dosage forms; (8) Encapsulated liquid crystal thermography in the diagnosis and monitoring of peripheral vascular disorders; (9) Microcapsules for augmenting artificial kidney function; (10) Microcapsules for topical and other applications; (11) U.S. Food and Drug Administration interest in microencapsulated animal drugs; (12) Prospective uses of microencapsulation in veterinary and zootechnical practice; (13) Bioavailability from microencapsulated drugs; (14) Poly (phthaloyl L-lysine) microcapsules containing hemoglobin solution: artificial red blood cells; (15) The surface characteristics of gelatin coacervate microcapsules by scanning electron microscopy; (16) Some physical chemical aspects of diffusion from microcapsules; and (17) Encapsulation techniques for pharmaceuticals: considerations for the microencapsulation of drugs.

481. Notari, Robert E. **Biopharmaceutics and Clinical Pharmacokinetics: An Introduction**. 3rd ed. Rev. and enl. New York: Marcel Dekker, 1980. 388p. illus. bibliog. index. \$22.50. LC 80-10676. ISBN 0-8247-6928-7.

The author of this text intends that it be used as an introduction to the subject. Development of concepts is the primary goal, and examples have been included to illustrate these concepts. The material is presented in a fashion suitable for self-study, and topics are covered in a cumulative manner.

Chapter headings are: (1) Bioavailability; (2) Rate processes in biological systems; (3) Principles of pharmacokinetics; (4) Biopharmaceutics: Clinical applications of pharmacokinetic parameters; (5) Dosage regimens; (6) Pharmacokinetic aspects of structural modifications in drug design and therapy; (7) An overview of pharmacokinetic applications in clinical practice.

Although the author says his book is an introduction, some reviewers believe it would be difficult for the novice and that it can best serve as an excellent adjunct to a simpler introductory text.

482. Noyes Development Corporation. **Basic Patents for Major Drugs, 1969**. Park Ridge, NJ: Noyes Development Corporation, 1969. 3 volumes. index. \$75.00 (the set). LC 76-76067. ISBN 8155-0266-4.

These large volumes reproduce basic patents for 301 major drugs marketed in the United States. The arrangement is alphabetical by the generic name of the drug. There are three indices: subject, chronologic and patent number, and therapeutic. The

arrangement of the chronologic index, which is by issue date of the patents, enables the user to determine the expiration date because patents expire 17 years after they are issued.

483. Parrott, Eugene L. **Pharmaceutical Technology: Fundamental Pharmaceutics**. Minneapolis, MN: Burgess Publishing, 1970. 415p. illus. index. \$28.95. LC 70-92313. ISBN 0-8087-1628-X.

The author of this textbook says it is designed for the undergraduate student in pharmacy who has completed courses in mathematics, organic chemistry, physics, and zoology. It contains the minimum pharmaceutical information required as a prerequisite to the dispensing pharmacy course and to the proper practice of pharmacy. It quantitatively correlates physicochemical theories with the characterization, development, evaluation, and preparation of dosage forms.

The presentation is in three parts: solids, solutions, and polyphasic and plastic systems. A review of mathematics is supplied in an index.

484. **Quality Control in the Pharmaceutical Industry**. Edited by Murray S. Cooper. New York: Academic Press, 1972-. illus. bibliog. index. LC 79-187248. ISBN 0-12-187601-2 (Volume 1).

This multivolume treatise is a guide to nearly every aspect of the quality control of pharmaceutical products. Several scientific disciplines are involved: biochemistry, analytical chemistry, physiology, and microbiology. Administrative matters and the function of government agencies also are touched on. Authored by major contributors in the field, the work is intended for the scientist or administrator in the pharmaceutical industry. Teachers also find the set of value.

The latest volume includes chapters on filtration; bioavailability standards; GMP regulations; and quality control of vaccines, ophthalmic products, and other formulations.

At this writing, only three volumes of the series have appeared. It is not clear whether more volumes are intended. It is presumed so; the work has been well received.

485. Ritschel, W. A. **Graphic Approach to Clinical Pharmacokinetics**. With a foreword by David J. Greenblatt. Barcelona, Spain: J. R. Prous Publishers; distr. Drug Intelligence Publications, Hamilton, Illinois, 1983. 87p. \$20.00pa. ISBN 84-499-6142-4.

The area of pharmacokinetics has developed as an independent discipline during the past 30 years, and about 10 years ago the discipline of clinical pharmacokinetics was recognized as an offspring of classic pharmacokinetics. It is concerned with the application of pharmacokinetics to the patient to make drug therapy most effective. This book takes an innovative approach to clinical pharmacokinetics. This technique allows one who can plot data points to simply read the derived pharmacokinetic variables (rate constants and half-lives for elimination, distribution, and absorption) and the predicted data directly from the nomogram without the time-consuming and complex intervening calculations. The nomogram used throughout the book is available in an enlarged size pad of 50. The compiled nomogram can be attached to each patient's chart.

The book is intended as a manual for clinical application, but according to the author it may be useful for teaching medical and pharmacy students.

Some reviewers have felt that the methods described in the book may be interesting to researchers to estimate parameters that later could be refined by more sophisticated

computer analysis, but that routine therapeutic drug monitoring can better be carried out using programmable hand-held calculators.

486. Ritschel, W. A. **Handbook of Basic Pharmacokinetics**. 2nd ed. Hamilton, IL: Drug Intelligence Publications, 1980. 454p. bibliog. index. \$19.50. LC 79-90428. ISBN 0-914768-34-4.

This handbook is also a textbook of a sort, and it also covers biopharmaceutics as well as pharmacokinetics. The coverage is introductory, but a comprehensive overview is presented.

The chapter headings are: (1) Definition and glossary; (2) The LADME system—liberation, absorption, distribution, metabolism, and excretion; (3) Organs, tissues, cells and organelles; (4) Cell membranes—structure, functions, and properties; (5) Drug receptor interactions; (6) Absorption mechanisms; (7) pK_a and degree of ionization; (8) Lipoid/water partition coefficient; (9) Physico-chemical factors altering biological performance of drugs; (10) Biopharmaceutical data of the gastrointestinal tract; (11) Fluid compartments and circulatory system; (12) Binding of drugs to biological material; (13) Drug metabolism; (14) Excretion and clearance of drugs; (15) Urinary and biliary recycling; (16) Compartment models; (17) Determination of rate constants; (18) Volume of distribution and distribution coefficient; (19) Pharmacokinetics of single dose administration; (20) Pharmacokinetics of multiple dosing; (21) Area under the blood level curve; (22) Cumulative urinary excretion; (23) Drug dosage in children; (24) Drug dosage in elderly patients; (25) Drug dosage in obese patients; (26) Dosage regimen adjustment; (27) Physiological and pathological factors influencing drug response; (28) Nonlinear pharmacokinetics; (29) Curve fitting; (30) Correlation of clinical response with drug disposition; and (31) Bioavailability and bioequivalence.

The text contains many mathematical equations, diagrams, schematic drawings, and tables with pharmacokinetic data on commonly used drugs. The work has been well received and is recommended for clinical pharmacists and students in courses in biopharmaceutics and pharmacokinetics.

487. Robinson, Joseph R., ed. **Sustained and Controlled Release Drug Delivery Systems**. New York: Marcel Dekker, 1978. 773p. illus. bibliog. index. (Drugs and the Pharmaceutical Sciences, Volume 6). \$75.00. LC 78-23358. ISBN 0-8247-6715-2.

There are a variety of drug modifications and dosage forms available which, at least to some extent, have been able to control the time course and specificity of drugs in the body. They have been called various names, such as "prodrug," "controlled release," "sustained release," "prolonged release," and "timed release." However, maximum utilization of the therapy usually has not been achieved. The editor of this book remarks that none of the commercially available systems presently on the market is really a controlled drug-delivery system; some are just better than others. This book was designed to provide a comprehensive picture of the area of sustained-release drug products, each chapter written by an expert and with many literature references provided.

Chapter headings are: (1) An overview of prolonged action drug dosage forms; (2) Drug properties influencing the design of sustained or controlled release drug delivery systems; (3) Methods to achieve sustained drug delivery—the physical approach: oral and parenteral dosage forms; (4) Methods to achieve sustained drug delivery—the physical approach: implants; (5) Pathological evaluation of injection injury;

(6) Methods to achieve sustained drug delivery—the chemical approach; (7) Methods to achieve controlled drug delivery—the biomedical engineering approach; (8) Pharmacokinetic considerations in the design of controlled and sustained release drug delivery systems; and (9) Multiple dosing of sustained release systems. A drug index has been included, as well as author and subject indices.

The text has been well received and should be valuable to graduate students, pharmaceutical scientists, and anyone interested in the subject.

488. Roseman, Theodore J., and S. Z. Mansdorf, eds. **Controlled Release Delivery Systems**. New York: Marcel Dekker, 1983. 402p. illus. bibliog. index. \$57.50. ISBN 0-8247-1728-7.

An outgrowth of the 8th International Symposium on Controlled Release of Bioactive Materials held 26-29 July, 1981 in Fort Lauderdale, Florida, this book covers a range of topics from biomedical applications to agricultural uses for release vehicles for pesticides and herbicides. Emphasis is on polymeric delivery systems.

There are 25 chapters. Following an introductory section, there are 13 chapters addressing the topics of controlled-release pharmaceuticals, biologic aspects, bioerodible and swellable systems, encapsulated systems, and polymers in general. Included among the methods described are liposomal entrapment, prodrug formation, bioerosion of polymeric matrices, microencapsulation, and aqueous suspension formation. One chapter describes the theory of drug release from swellable polymeric matrices, and another deals with radioisotopic labeling of polymers. The remaining chapters cover controlled release of materials such as pesticides, herbicides, and pheromones.

The book does not provide an in-depth discussion of any of the topics, but it does give the reader a view of the state-of-the-art of controlled-release technology. The researcher and product manager in industry and researchers in government and academic institutions should find the book useful. In addition, it is a good reference source for pharmacists, pharmacologists, chemical engineers, and others.

489. Rowland, Malcolm, and Thomas N. Tozer. **Clinical Pharmacokinetics**. Philadelphia, PA: Lea & Febiger, 1980. 331p. illus. bibliog. index. \$29.50. LC 79-10735. ISBN 0-8121-0681-4.

The authors say that the lack of a book that teaches the application of pharmacokinetics in drug therapy prompted them to write this text. The emphasis of most books on pharmacokinetics has been on kinetics and modeling. This text should be useful to students, practitioners, or researchers who are interested in or engaged in the development, evaluation, or use of drugs in man. It is an introductory work.

There are 18 chapters grouped under these headings: concepts; disposition and absorption kinetics; therapeutic regimens; and individualization. Chapter headings are: (1) Why clinical pharmacokinetics? (2) Basic considerations; (3) Absorption; (4) Distribution; (5) Clearance and renal excretion; (6) Hepatic clearance and elimination; (7) Intravenous dose; (8) Constant rate intravenous infusion; (9) Extravascular dose; (10) Metabolite kinetics; (11) Integration of concepts and kinetics; (12) Therapeutic response and toxicity; (13) Dosage regimens; (14) Variability in drug response; (15) Age and weight; (16) Renal function impairment; (17) Drug interactions; and (18) Monitoring drug therapy. Appendices include mathematical tables and answers to problems.

490. Rubin, Alan A., ed. **New Drugs: Discovery and Development**. New York: Marcel Dekker, 1978. 313p. illus. bibliog. index. (Drugs and the Pharmaceutical Sciences, Volume 5). \$49.50. LC 77-16084. ISBN 0-8247-6634-2.

This volume is concerned with the search for new drugs from the vantage point of the industrial researcher. All of the contributors are researchers in pharmaceutical companies. The subjects covered in the book were selected for their broad appeal and include the following: (1) Antiarthritics; (2) Antiallergics; (3) Antihypertensives; (4) Antianginals; (5) Antiarrhythmics; (6) Major tranquilizers; (7) Minor tranquilizers; (8) Antidepressants; and (9) Analgesics.

The authors have presented their personal views on the advantages and shortcomings of current drug evaluation methodology, the profile of an ideal drug, and the possible future developments in their respective areas of expertise.

The book can serve as a guide and desk reference for biologists and chemists and is of particular interest to pharmacologists responsible for evaluation and development of drugs of the types discussed.

491. Sadée, Wolfgang, and Geertrudis C. M. Beelen. **Drug Level Monitoring: Analytical Techniques, Metabolism, and Pharmacokinetics**. New York: John Wiley & Sons, 1980. 495p. bibliog. index. (A Wiley-Interscience Publication). \$43.95. LC 79-22652. ISBN 0-471-04881-X.

This widely used and very valuable work shows how the principles of drug analysis and drug disposition are applied to drug-level monitoring in determining optimal individual drug doses in clinical situations. It serves as a guide to the analytic techniques used in drug assays and as a reference source for metabolic and pharmacokinetic data. The intended audience includes analytic and clinical chemists, physicians, clinical pharmacists and pharmacologists, biochemical and pharmacologic researchers, and students of pharmacy.

The first three chapters present brief overviews of these areas: metabolism; pharmacokinetics; and clinical pharmacokinetics and therapeutic drug-level monitoring. Included in the introductory section is a table, "Summary of Pharmacokinetic and Metabolic Data on 102 Selected Drugs." Chapter 4 is made up of discussions of various analytic techniques. Chapter 5, which makes up about 80 percent of the book, presents alphabetically arranged individual monographs on the 102 drugs listed in the previously mentioned table. Information provided about each includes chemical formula, structure and pKa (if applicable), therapeutic concentration ranges, metabolism, analogous compounds, analytic methods, and literature references. An addendum provides a literature update to November 1979.

492. Shargel, Leon, and Andrew B. C. Yu. **Applied Biopharmaceutics and Pharmacokinetics**. New York: Appleton-Century-Crofts, 1980. 253p. illus. bibliog. index. \$18.50pa. LC 79-28546. ISBN 0-8385-0206-7.

There are a number of recent texts on biopharmaceutics and pharmacokinetics that range from the highly theoretical and mathematical to the strictly applied. This one is intermediate in theory and mathematical complexity and is suitable for undergraduate students in pharmacy and the allied health sciences. Its main objective is to present basic concepts to students who have at least minimal skills in mathematics, with the emphasis on application and understanding of concepts.

The book contains 17 relatively short chapters as follows: (1) Review of mathematical fundamentals; (2) Rates and orders of reactions; (3) Introduction to

pharmacokinetics; (4) One-compartment open model; (5) Multicompartment models; (6) Biopharmaceutic aspects of drug products; (7) Pharmacokinetics of drug absorption; (8) Bioavailability and bioequivalence; (9) Drug clearance; (10) Hepatic elimination of drugs; (11) Protein binding of drugs; (12) Intravenous infusion; (13) Multiple dosage regimens; (14) Nonlinear pharmacokinetics; (15) Application of pharmacokinetics in clinical situations; (16) Dosage adjustment in renal disease; and (17) Relationship between pharmacokinetic parameters and pharmacologic response. Practice problems ranging from very simple to fairly difficult are included.

493. Sittig, Marshall. **Manufacturing Processes for New Pharmaceuticals**. Park Ridge, NJ: Noyes Publications, 1983. 612p. bibliog. index. (Chemical Technology Review No. 220). \$84.00. LC 83-13074. ISBN 0-8155-0952-9.

Provided in this work are the details or processes for the manufacture of about 500 new pharmaceuticals that were undergoing Food and Drug Administration approval at the time the book was written. The information included was taken from the patent literature. Emphasis is on the practical synthesis of the products that had attained generic name status but usually had not yet been assigned trade names.

The arrangement is alphabetical, with the following information usually given: drug function, chemical name, common names (if any), structural formula, manufacturer's code number, trade name (if it had been assigned), manufacturing method, and references. An index is provided of companies holding patents for the drugs.

494. Smith, Robert V., and James T. Stewart. **Textbook of Biopharmaceutic Analysis: A Description of Methods for the Determination of Drugs in Biologic Fluids**. Philadelphia, PA: Lea & Febiger, 1981. 308p. illus. bibliog. index. \$25.00. LC 80-39872. ISBN 0-8121-0770-5.

It is evident that many pharmacists are increasingly being employed in clinical settings where patient drug monitoring activities are required. Scientists in the field also are becoming more involved in biopharmaceutic studies. Procedures are needed for the determination of drugs and their metabolites in biologic fluids, and this book addresses these needs. It is designed as a textbook mainly for undergraduate and Pharm. D. students in pharmacy, but graduate students in the pharmaceutical sciences also should find it useful.

The presentation is in three sections: (1) Defining the problem (Introduction; Procurement and characterization of standard reference materials); (2) The separation step (Separation; Purification methods); and (3) The measurement step (Statistics; Chromatographic data; Spectrophotometry; Fluorimetry; Electroanalytic methods; Radiochemical methods; Immunoassays; Microbiologic assays; Enzymatic analysis; Methods of choice). Included are structural formulas for nearly all medicinals discussed and many figures and tables. These materials are said to be the main strengths of the book.

495. Smolen, Victor F., and Luann Ball, eds. **Bioavailability Methodology and Regulation**. New York: John Wiley & Sons, 1984. 259p. illus. bibliog. index. (Controlled Drug Bioavailability, Volume 2). \$65.00. LC 83-16679. ISBN 0-471-88200-3.

The second volume in a continuing series, this work is of special value to the pharmacokineticist who must design effective testing methods for the safety,

effectiveness, and reliability of drug products and report the results to the Food and Drug Administration. It is also of value in assisting the student in the pharmaceutical sciences in understanding the process of drug testing and development.

Chapter titles are: (1) Experimental factors influencing the results of drug product bioavailability/bioequivalency studies in humans; (2) Animal studies and the bioavailability testing of drug products; (3) In-vitro drug product dissolution testing: correlation of results in in-vivo drug bioavailability parameters; (4) Computational conversion of in-vitro drug dissolution data into in-vivo drug response versus time profiles; (5) In-vitro drug product dissolution testing: apparatus and methodologies; (6) Pharmacokinetic considerations in drug studies; and (7) Computer resolution of bioavailability and pharmacokinetic data from recorded physiologic signals exemplified for organic nitrates.

496. Smolen, Victor F., and Luann Ball, eds. **Drug Product Design and Performance**. New York: John Wiley & Sons, 1984. 297p. bibliog. index. (Controlled Drug Bioavailability, Volume 1). \$65.00. LC 83-6726. ISBN 0-471-05732-0.

This is the first volume of a continuing series of books covering drug-delivery systems that are designed to provide maximum therapeutic benefits. It provides state-of-the-art guidance in the development of designs for older generic drugs and new drugs at lower cost. A recurring theme is the link between the time in which a drug product releases its contents and the therapeutic effects achieved.

There are nine chapters reviewing various aspects of the problem: (1) Optimally controlled drug bioavailability in theory and products; (2) Applied biodynamic analysis of drugs; (3) Pharmacokinetic analysis of drug-responding systems: drug bioavailability input-response relationship; (4) Systems analysis and optimization of drug input functions; (5) Pharmacokinetic-model-based optimization of drug inputs exemplified by an administration strategy of insulin; (6) Kinetic hysteresis as a tool for analysis of pharmacokinetic data; (7) Mathematical modeling of diffusion processes in drug delivery polymeric systems; (8) Design of experiments and statistical analysis of biological studies; and (9) Marketing in a generic environment.

The work is intended for pharmacokineticists, pharmacologists, and students of these disciplines.

497. U.S. House of Representatives, 96th Congress, Second Session. **The Food and Drug Administration's Process for Approving New Drugs**. Report prepared by the Subcommittee on Science, Research and Technology of the Committee on Science and Technology. Serial HHH. (Committee Print). Washington, DC: Government Printing Office, 1980. 88p. S/N 052-070-054883.

At the present time in the United States, the process from research to marketing approval for a new drug takes from 7 to 13 years and costs from 30 to 50 million dollars. Although the Food and Drug Administration has been zealously carrying out its mandate to protect the public from unsafe or ineffective drugs, it has frequently been criticized because the process is so slow and expensive. Drug manufacturers, physicians, and patients alike have been concerned about the problem. Other technologically advanced countries of the world do not have such a long "drug lag."

This document is based on Congressional hearings about the problem. It includes a background section that analyzes the Science, Research and Technology Subcommittee hearings under these headings: (1) The U.S. drug lag; (2) Health impact of the drug lag; (3) Factors contributing to the drug lag; (4) Reasons for the FDA's slower drug approval

process; and (5) Effect of the drug lag on innovation and productivity in the pharmaceutical industry. There are also sections of conclusions and recommendations. The recommendations include: (1) Promote better postmarketing surveillance programs; (2) Give FDA a lesser role in the early aspects of clinical research; (3) Give expert panels a stronger role in the decision making on the approval of new drugs; (4) Give more weight to data from well-controlled foreign clinical studies; (5) Establish a procedure whereby drugs for crisis ills are expedited; (6) Establish a simple procedure whereby small numbers of patients and physicians can obtain drugs not yet approved by the FDA—drugs for “orphan diseases”; (7) Encourage flexibility in the U.S. pharmaceutical industry by allowing export permits for drugs approved in other countries; (8) Encourage better management practices at the FDA; (9) Establish or strengthen an “ombudsman” capability within the FDA; (10) Establish a simple and expeditious appeal system for resolving scientific disputes; (11) Promote international cooperation and exchange; and (12) Lower innovation disincentives through patent reform.

498. Wagner, John G. **Fundamentals of Clinical Pharmacokinetics**. Hamilton, IL: Drug Intelligence Publications, 1975. 461p. illus. bibliog. index. \$46.00. LC 75-5443. ISBN 0-914678-20-4.

The purpose of pharmacokinetics is said to be to “study the time courses of drug and metabolite concentrations and amounts in biological fluids, tissues and excreta, and also of pharmacological response, and to construct suitable models to interpret such data.” Much mathematical calculation is involved; the data are processed using a mathematical representation of a part of the whole of an organism.

The intent of this book is to organize the knowledge of pharmacokinetics with emphasis on human data so that it may ultimately be useful in the clinical use of drugs. The book is intended for use as a textbook for fifth and sixth year pharmacy students and also for use by graduate students. It is also a suitable reference book for scientists in medical and pharmaceutical disciplines.

The treatment is comprehensive. Chapter headings are: (1) Introductory material; (2) Linear pharmacokinetic models; (3) Dosage and regimen calculations; (4) Absorption plots and estimation of absorption rate constants; (5) Absorption models; (6) Use of Laplace transforms for linear models; (7) Nonlinear pharmacokinetics; (8) Statistics; (9) Relationships between drug concentration and response and kinetics of pharmacologic response; (10) Bioavailability; (11) Effect of normal and pathologic physiology on pharmacokinetics; and (12) Automated pharmacokinetic analysis. The text is illustrated with many tables, graphs, and equations, and clinical examples are provided.

499. Wartak, Joseph. **Clinical Pharmacokinetics: A Modern Approach to Individualized Drug Therapy**. New York: Praeger Publishers, 1983. 216p. illus. bibliog. index. (Clinical Pharmacology and Therapeutics Series, Volume 2). \$35.00. LC 82-18577. ISBN 0-03-062652-8.

The author of this work says in his preface that although the importance of the pharmacokinetic approach to drug dosage has been emphasized in the medical literature, this methodology is little known outside a narrow circle of specialists. He further remarks that this is because pharmacokinetics is not included in the curricula at medical schools, practicing physicians still consider the subject an esoteric branch of pharmacology with little significance to daily practice, and it is difficult to learn because

it is based on mathematical concepts. Wartak's purpose is to provide essential theoretical information on pharmacokinetics and illustrate how parameters such as drug clearance, plasma half-life, volume of distribution, and protein binding can be employed for correcting problems in drug therapy. He also has attempted to simplify the mathematics.

Chapter headings are: (1) The fate of drugs in the body; (2) Concentration of drugs in the blood; (3) Monitoring of drug concentrations; (4) Pharmacokinetic models; (5) Simulation of pharmacokinetic processes; (6) Drug distribution; (7) Drug transfer; (8) Elimination rate constants; (9) Elimination time constants; (10) Clearance of drugs; (11) Kinetics of drug absorption; (12) Calculation of pharmacokinetic parameters; (13) Pharmacokinetic approach to drug dosing; (14) Application of pharmacokinetic principles to dosage adjustment in renal failure; and (15) Application of pharmacokinetic principles to digitalis therapy.

Reviewers have not recommended the book wholeheartedly but concede that it is good reading and written with good intentions.

500. Willig, Sidney H., Murray M. Tuckerman, and William S. Hitchings IV. **Good Manufacturing Practices for Pharmaceuticals: A Plan for Total Quality Control**. 2nd ed. Rev. and enl. New York: Marcel Dekker, 1982. 259p. bibliog. index. (Drugs and the Pharmaceutical Sciences, Volume 16). \$49.75. LC 82-13055. ISBN 0-8247-1664-7.

The first edition of this work, published in 1975, became outdated because of the Food and Drug Administration's revisions in Current Good Manufacturing Practices (CGMP) regulations. The intent of the authors has not been to propose a plan of minimum or regulatory compliance, but rather to provide an approach to ensure the quality of pharmaceutical preparations. The authors say that built into the system are such factors as quality control, security, personnel evaluation, and the "inevitable trail of paper to show what was done, who did it and when, and who saw and attested to the doing." The chapters of the book seek to provide specific guidelines and concepts that can serve as checks for critical operations so quality control can be achieved. The authors present each of the parts of the CGMP regulations with explanations and discussions. They present their own interpretations and those of others. In addition, practical court cases are presented where relevant. Because the CGMP regulations are broad, the book helps clarify them.

Presented are 17 chapters covering such topics as the current status and applicability of the regulations; finished pharmaceuticals; organization and personnel; buildings and facilities; equipment; returned and salvaged drug products; repacking and relabeling; inspection for compliance with CGMP; recalls; controlled substances safeguards; regulations concerning the identification of the manufacturer on labels; and potable water standards (the latter in an appendix).

The book has been well regarded and is considered valuable for reference and as a text on the requirements for the manufacture and control of pharmaceuticals.

501. Winter, Michael E. **Basic Clinical Pharmacokinetics**. With Brian S. Katcher and Mary Anne Koda-Kimble. San Francisco, CA: Applied Therapeutics, 1980. 231p. illus. bibliog. index. \$22.00pa. LC 80-69785. ISBN 0-915486-04-0.

The evaluation of drug concentrations in biologic fluids has gained increasing acceptance as a guide for monitoring drug therapy. The author of this work attempts to break down the mathematical basis for drug monitoring into an understandable number of equations and to introduce the concepts involved step by step.

The presentation is in two parts. The first part is divided into sections that describe major pharmacokinetic parameters and their clinical applications. The principles discussed in Part 1 give the clinician a basis for interpreting plasma drug concentration and manipulating the dosage regimens for the drugs discussed in Part 2 of the text. Part 2 discusses eight drugs: digoxin, lidocaine, procainamide, quinidine, theophylline, gentamicin, phenobarbital, and phenytoin. Each drug is presented with a series of questions relating to its use answered. The drugs chosen illustrate fundamental principles well and are frequently monitored. Appendices include nomograms for calculating body surface area, a list of equations used throughout the text, and a glossary of terms and abbreviations.

502. Wise, Donald L., ed. **Biopolymeric Controlled Release Systems**. Boca Raton, FL: CRC Press, 1984. 2 volumes. bibliog. index. \$80.00; \$88.00. LC 83-25276. ISBN 0-8493-5403-X; 0-8493-5404-8.

This book has evolved from the editor's work in developing biopolymeric systems for the controlled release of biologically active agents. His experience has been mainly in developing programs for fertility control, treatment of narcotic addiction, and prophylaxis of malaria.

The text, written by various experts, is arranged under these headings: (1) Antimalarials; (2) Narcotic antagonists; (3) Fertility control; (4) Alcoholism; and (5) Broadcast applications. Several chapters cover the mechanism for controlled release, and the last section includes material on alternative applications.

The editor is vice president of Dynatech R/D Company of Cambridge, Massachusetts, and he formerly held an academic position. His book is suitable for industrial and academic research directors and program managers who are exploring the potential of biopolymeric controlled-release systems.

503. Yalkowsky, Samuel H., Anthony A. Sinkula, and Shri C. Valvani, eds. **Physical Chemical Properties of Drugs**. New York: Marcel Dekker, 1980. 361p. bibliog. index. (Medicinal Research, Volume 10). \$45.00. LC 80-22598. ISBN 0-8247-1008-8.

The question of the relationship of physicochemical properties of drug activity between structurally related and nonrelated chemical compounds is explored in this book. The various authors of the contributions have provided theoretical aspects as well as practical approaches to the estimation and understanding of the pharmacologically relevant physicochemical properties of drug molecules.

There are ten chapters as follows: (1) Prediction of pKa values; (2) The quantitative relationship between pKa, ionization and drug potency; utility of model-based equations; (3) Role of the Hansch partition coefficient as a descriptor of drug transport and receptor interaction in correlation analyses; (4) Limitations and prospects for the Hansch approach to SAR; (5) Computation of partition coefficients from molecular structures by a fragment addition method; (6) Solubility and partitioning in drug design; (7) Thermodynamic considerations in physical property improvement through prodrugs; (8) Simultaneous determination of the solubility parameter, δ , and molar volume, V, for some para-substituted acetanilides in water; (9) Molecular connectivity as a description of structure for SAR analyses; and (10) Molecular surface areas and volumes and their use in structure/activity relationships.

504. Yalkowsky, Samuel H., ed. **Techniques of Solubilization of Drugs**. New York: Marcel Dekker, 1981. 224p. illus. bibliog. index. (Drugs and the Pharmaceutical Sciences, Volume 12). \$39.75. LC 81-15262. ISBN 0-8247-1566-7.

Drug efficacy can be severely limited by poor aqueous solubility, and, in addition, side effects of some drugs are the result of their poor solubility. Therefore, the ability to increase solubility can be a valuable aid when dealing with parenterally, topically, and orally administered solutions. This book provides a comprehensive guide to techniques available for overcoming solubility problems. It provides guidelines for the selection of the most suitable means for solubilizing a particular drug to combat reduced efficacy, minimize undesirable side effects, and exploit structure-property relationships.

The following chapters, each written by an expert, are presented: (1) Solubility and solubilization of nonelectrolytes; (2) Drug solubilization in surfactant systems; (3) Solubilization of drugs by cosolvents; (4) Alteration of apparent solubility through complexation; (5) Solubilization by solid-state manipulation; and (6) Drug derivatization as a means of solubilization: physicochemical and biochemical strategies.

15 Medicinal Chemistry and Pharmacognosy

Although there are many publications in the field of chemistry that are of great value to medicinal chemists and pharmacognosists, this listing is for the most part limited to works that deal specifically with drugs. This was felt to be necessary to keep the section to reasonable size. In addition, relatively few titles dealing with herbs and medicinal plants have been included because these have been covered rather comprehensively in Andrews' *A Bibliography on Herbs, Herbal Medicine, "Natural" Foods, and Unconventional Medical Treatment* (entry 5). That bibliography contains a section on "Medicinal Plants and Their Constituents," and many of the titles listed are intended for the research-level audience.

Several titles in the German language have been included here, attesting to the fact that valuable works appear in that language.

Titles are included in the areas of pharmaceutical, medicinal, analytic, and natural product chemistry. There is, in addition, one title on inorganic pharmaceutical chemistry and one on the solid-state chemistry of drugs. There are a few titles covering drug design and some dealing with nuclear pharmacy and radiopharmaceuticals.

Listed are books dealing with a few special classes of drug such as antibiotics and anticancer drugs. Also, several titles on alkaloids are included because many members of that class of compound have medicinal uses.

505. **The Alkaloids.** Editors have varied: R. H. F. Manske, R. G. A. Rodrigo, Geoffrey A. Cordell, and Arnold Brossi. New York: Academic Press, 1950- . bibliog. index. About \$50.00-\$100.00 per volume. LC 50-5522.

This continuing series is of excellent quality and has become a classic in the alkaloid field. With Volume 21 Brossi became editor, and the characteristics of the set changed a little. The term "alkaloid" was interpreted in broader terms so that cyclic nitrogenous compounds produced by plants, microorganisms, sponges, amphibians, and mammals are discussed as well as plant alkaloids. Also with Volume 21 the subtitle of the series has been changed from "Chemistry and Physiology" to "Chemistry and Pharmacology." Each volume presents about seven scientific chapters with extensive literature surveys.

506. ApSimon, John, ed. **The Total Synthesis of Natural Products**. New York: John Wiley & Sons, 1973-. illus. bibliog. index. About \$60.00 per volume. LC 72-4075. ISBN 0-471-03251-4 (Volume 1).

The study of natural products frequently has provided the impetus for notable advances, particularly in the field of medicinal chemistry. The volumes of this set, the first definitive reference source of its kind, bring together material on total syntheses of various groups of natural products with commentary on the strategy involved and emphasis on any stereochemical control. Each volume has been concerned with describing the reports on and the progress of certain classes of natural products, although in some instances recent volumes have updated earlier ones. Many of the contributors to the set are from pharmaceutical industries.

The series is highly regarded.

507. Banes, Daniel. **A Chemist's Guide to Regulatory Drug Analysis**. Washington, DC: Association of Official Analytical Chemists, 1974. 133p. bibliog. index. \$7.00. LC 74-75346.

This publication is addressed to chemists concerned with the regulatory analysis and quality control of drugs. There are three parts presented, each with a separate purpose.

The first section is a guide to drug control laws and regulations. Legal origins are traced and the purposes, functions, and responsibilities indicated. The second part is a guide to literature resources that are of interest to regulatory drug analysts. This section is also of interest to librarians, although the materials listed are well known to most librarians in the pharmaceutical field. Official pharmacopeias and formularies, unofficial compilations, drug indices, encyclopedias, dictionaries, and other pertinent reference works are reviewed in some detail.

The third and longest section is a guide to the structure of regulatory drug analytic methods. The constructional features of methods suitable for and useful in regulatory drug analysis are studied.

The publication is of value, but the author points out that methods employed in drug analysis are in a state of continual flux and that they are outdated by the time they appear in print. The same can be said of some of the publications listed, because most have been replaced with new editions and/or new titles. However, in spite of this, the list presented is a good one.

508. Beckett, A. H., and J. B. Stenlake. **Practical Pharmaceutical Chemistry**. 3rd ed. Parts 1-2. London, England: Athlone Press, 1975-76. 2 volumes. illus. bibliog. index. \$66.50 (the set). ISBN 0-485-11156-X; 0-485-11159-4.

The first volume of this text covers general pharmaceutical chemistry. It is intended as an introductory work to provide the basis for laboratory classes in pharmaceutical

analysis. Many of the examples selected for inclusion were based on the *British Pharmacopoeia* and the *European Pharmacopoeia* (see entries 94, 96, and 509).

The second volume deals with physical methods of analysis and is intended for the more advanced student. The material is less closely linked to the pharmacopoeias and is therefore more suitable for advanced course use where other standard reference works are used.

Beckett and Stenlake's work has been a standard text in Great Britain and has been recommended for chemistry as well as for pharmacy students as an introduction to modern physical methods.

509. British Pharmacopoeia 1980: Infra-red Reference Spectra. Published on the recommendation of the Medicines Commission pursuant to the Medicines Act 1968. London, England: Her Majesty's Stationery Office, 1980. 336p. index. \$110.00. ISBN 0-11-320303.

A companion volume to the *British Pharmacopoeia* (entry 94), this book contains about 275 full-sized reproductions of infrared spectra for use in conjunction with the analytic specifications included in many of the *British Pharmacopoeia* monographs. They also may be of wider interest.

The book is in two sections, the reference spectra and methods of sample preparation. The latter consists of a collection of methods for the preparation of the material being examined, arranged alphabetically by the name of the drug in question.

Supplements are issued every six months to complement the new and revised monographs contained in the addenda to the *British Pharmacopoeia*.

510. Burger, Alfred. Burger's Medicinal Chemistry. Edited by Manfred E. Wolff. 4th ed. New York: John Wiley & Sons, 1980-81. 3 volumes. bibliog. index. \$59.00, Part 1; \$150.00, Part 2; \$134.00, Part 3. LC 78-10891. ISBN 0-471-01570-9; 0-471-01571-7; 0-471-01572-5.

Considered the most comprehensive, authoritative text in the field of medicinal chemistry, each chapter of this three-volume work is written by a noted authority. Part 1, called "The Basis of Medicinal Chemistry," outlines principles and serves as a companion volume to the other two parts, which take up drugs by classes. The makeup of the chapters in Volumes 2 and 3 varies somewhat, but information is usually given on the following: the nature of the disease or diseases for which the class of drugs is used, mechanisms of action of the drugs, and methods for their evaluation. In addition, each chapter contains the structures of compounds that have been tested for the drug effects under consideration.

The work gives a clear view of current progress in the various areas of medicinal chemistry. The emphasis is on the interface between chemistry and biology, covering structure-function relationships, metabolism, toxicity, and biochemistry. The synthesis of drugs is not covered. The subject matter is treated very thoroughly with many useful tables, graphs, and structures provided. In addition, there are comprehensive lists of references at the end of each chapter, one including over 900 items.

Burger's work is considered indispensable to anyone desiring information on the subjects covered. It is of interest to a wide audience: pharmacists, medicinal and pharmaceutical chemists, pharmacologists, and others in the biomedical sciences. Practitioners, graduate students, teachers, and researchers all use it.

511. Burger, Alfred. **A Guide to the Chemical Basis of Drug Design**. New York: John Wiley & Sons, 1983. 300p. bibliog. index. \$45.00. LC 83-3575. ISBN 0-471-86828-0.

The author of this book has devoted his remarkable career to medicinal chemistry and is the author of the classic treatise on the subject, *Burger's Medicinal Chemistry* (see entry 510). In the book under review he has not surveyed the whole field but rather has provided a description of how drug compounds are discovered and then modified to provide marketable products. He outlines experiences in drug design that have often led to the successful evolution of molecules with desired bioactivities. Burger says the design of compounds is not yet a reliable enough discipline to permit absolutely dependable predictions of biologic activity of a test compound, but that a number of experiences have narrowed down the choices of procedure from the randomness of earlier approaches. The book is a distillation of his experiences.

The presentation is in three major sections. The first section is a historical perspective. Each of the major discoveries before 1950 is covered. The second part, "Recent Research," contains brief descriptions of major developments in selected disease treatment that have occurred since 1950. The last section, "Selected Examples of Drug Design," provides a number of examples of medicinal-chemical thinking and planning that have been applied in the design of various classes of drugs. Most of the major classes are discussed.

The book, through its index, detailed contents sections, and bibliographies, makes it possible to identify most of the literature of drug design that appeared before 1980. The book is intended for medicinal scientists and students of medicinal chemistry. It will be useful as a text in graduate courses and to chemists who are not trained in medicinal chemistry but are attempting to practice in that area. Pharmacologists and toxicologists also will be interested in it, although Burger says he has used restraint with experimental details that a biologist must know.

512. Byrn, Stephen R. **Solid-State Chemistry of Drugs**. New York: Academic Press, 1982. 346p. bibliog. index. \$55.00. LC 82-13950. ISBN 0-12-148620-6.

There is not much literature on the solid-state chemistry of drugs, and there are no other complete books on the subject. Dr. Byrn says his object is to convince the reader that solid-state reactions of drugs can be understood in terms of the molecular structure of the solid and the chemistry of the reaction. The ultimate aim is to assist the interested individual in developing safer and more effective solid drug products.

The book is organized by type of reaction as follows: physical transformations, solid-gas reactions, solid-state photochemical reactions, and solid-state thermal reactions. There are several chapters presented under most of these headings. Also included is an introductory chapter on the solid-state, and, in addition, one on methods of analysis and one on kinetics of solid-state reactions. Miscellaneous topics in the solid-state chemistry of drugs also are discussed. A glossary is provided.

This is an important book for pharmaceutical scientists involved with solid dosage forms.

513. Colowick, Sidney P., and Nathan O. Kaplan, eds. **Methods in Enzymology**. New York: Academic Press, 1955-. bibliog. index. About \$75.00 per volume. LC 54-9110.

Several volumes a year are issued in this widely used, highly regarded series. It is a series that has established itself as a definitive reference source for those working in this discipline. Numerous experimental procedures are described in sufficient detail to allow the laboratory worker to carry out a particular technique or prepare an enzyme or

metabolic intermediate without searching the primary literature. Recent volumes often update methods previously described in earlier volumes.

Each volume usually treats a single topic, although some topics extend over several volumes. Recent volumes have covered these areas: steroids and isoprenoids; hormone action; immunochemical techniques; oxygen radicals in biologic systems; enzyme purification and related techniques; recombinant DNA; biomembranes; and interferons. Cumulative subject indices have been issued.

514. Connors, Kenneth A. **A Textbook of Pharmaceutical Analysis**. 3rd ed. New York: John Wiley & Sons, 1982. 665p. illus. bibliog. index. \$55.00. LC 81-19742. ISBN 0-471-09034-4.

Although written as an undergraduate text, the author of this book says that in some sections he has gone beyond that level, making the book helpful to graduate students and research analysts. The book has become a classic and can be used as a basic text in analytic chemistry, regardless of whether the course is exclusively for pharmacy students. Connors says he has tried to give a systematic and detailed account of modern pharmaceutical analysis to permit the student and the pharmacist to understand most analyses in principle and some in detail. The material presented should enable the student to understand the official compendia, reference works in analysis, and monographs and texts in analytic chemistry. It is not a catalog of assay methods for specific drugs, however.

The material is presented in six sections as follows: (1) Titrimetric analysis; (2) Physical and instrumental analysis; (3) Separation techniques; (4) Elemental analysis; (5) Chemical reactions in analysis; and (6) Some general topics. Among the useful appendices is a section of answers to problems given in the various chapters.

The book has been highly regarded. It is felt that considering the wide variety of techniques used in pharmaceutical analysis, both classic and modern approaches, the author has done well in concentrating it all into one textbook.

515. Dalton, David R. **The Alkaloids: The Fundamental Chemistry, a Biogenetic Approach**. New York: Marcel Dekker, 1979. 789p. bibliog. index. (Studies in Organic Chemicals, Volume 7). \$79.00. LC 79-4538. ISBN 0-8247-6788-8.

Based on a one-semester series of lectures, this book is intended to whet the reader's appetite for further exploration and thought. It presents advanced graduate level material. The author says he hopes to provide the student with an appreciation of order in structure type and biogenetic reasoning where alkaloids are concerned and also teach some chemistry. He calls his work a bare outline of what is known and has omitted entire classes of compounds.

The presentation includes these main parts: (1) Introduction; (2) Alkaloids derived from ornithine (excluding the tobacco alkaloids); (3) Alkaloids derived from lysine (excluding the tobacco alkaloids); (4) Alkaloids derived from nicotinic acid; (5) Alkaloids derived from tyrosine; (6) Alkaloids derived from tryptophan; and (7) Alkaloids derived from introduction of nitrogen into a terpenoid skeleton. Each part is broken down further with monographs on individual compounds presented. Structural diagrams are included with the text material, which includes such information as uses, isolation processes, pathways, intermediates, molecular formulas, and other chemistry.

516. Discher, Clarence A., Thomas Medwick, and Leonard C. Bailey. **Modern Inorganic Pharmaceutical Chemistry**. 2nd ed. Prospect Heights, IL: Waveland Press, 1985. 631p. index. \$25.00. ISBN 0-88133-120-X

The inorganic area of pharmaceutical chemistry has often been neglected in the recent past. The authors of this text feel that if it is to progress as a vital component of pharmaceutical education and the profession, changes are necessary, and they address these changes in their book. First, the modern theoretical approach and newer thinking must be incorporated into and applied to the presentation, and second, a presentation is needed that ties the subject matter of inorganic chemistry more closely to the health sciences.

The book is in three parts. The first section, "Modern Concepts of Chemical Reactions," reviews basic chemical theory. The second section, "Inorganic Chemistry in the Practice of Pharmacy," deals with inorganics of importance to the pharmacist in his efforts to produce suitable dosage forms such as solvents, acids and bases suitable for neutralizations, buffers, preservatives, distributing agents, fillers, and filter aids. The third section, "Inorganic Substances as Medicinal Agents," groups together medicinal substances of similar applications. Included are chapters on minerals, agents for control of pH, germicides and related substances, radioisotopes in pharmacy and medicine, and miscellaneous inorganic therapeutics. Sections of student "homework" are supplied at the ends of chapters.

517. Flück, Hans. **Medicinal Plants and Their Uses: Medicinal Plants, Simply Described and Illustrated with Notes on Their Constituents, Actions and Uses, Their Collection, Cultivation and Preparations**. With the collaboration of Rita Jasperson-Schib; translated from the German by J. M. Rowson. London, England: W. Foulsham and Co., Ltd., 1976. 188p. illus. (col.) index. \$11.95. ISBN 0-572-00903-8.

The author of this small book points out in the preface that many recent works about drug plants lack a critical approach, reporting without serious checking all uses attributed to them in both popular and scientific literature. He has attempted to compile a popular book based on scientific considerations.

About 150 plants are listed alphabetically by common name with a very attractive colored drawing illustrating each. The following information is provided: scientific name, common names, description, part used, habitat and collection, constituents and action, and usage.

The author also has provided special sections as follows: the use of medicinal plants; some important groups of active plant constituents and their mode of action; usage and methods of preparing medicinal plants; cultivation collection of medicinal plants; popular names of medicinal plants; calendar for collection of medicinal plants; teas from indigenous plants; lists of ailments and the plants used in their treatment; and a glossary.

The book is attractive and authoritative.

518. Foye, William O., ed. **Principles of Medicinal Chemistry**. 2nd ed. Philadelphia, PA: Lea & Febiger, 1981. 931p. bibliog. index. \$54.50. LC 80-23838. ISBN 0-8121-0722-5.

Intended primarily as a textbook for use by undergraduate pharmacy students in courses in medicinal chemistry, this book is also suitable for use by students in chemistry, pharmacology, pharmacognosy, biology, and by graduate students as well as undergraduates.

The first six chapters are an introduction, consisting of history and including discussions of principles, drug receptor theory, and drug metabolism. The next chapters systematically discuss major pharmacologic or therapeutic classes of drugs. In general, these chapters cover actions, absorption, distribution, metabolism and excretion, clinical uses, and structure-activity relationships. An appendix of pKa values for medicinal substances and pH values for body fluids is included.

The book has been reasonably well received. It is particularly strong in the biochemical and physiologic areas.

519. Franke, Rainer. **Theoretical Drug Design Methods**. New York: Elsevier/North Holland, 1984. 412p. illus. bibliog. index. (Pharmacochemistry Library, Volume 7). \$83.00. LC 83-20781. ISBN 0-444-99634-6.

Published in coedition with Akademie-Verlag, Berlin, DDR, this is a translation of *Optimierungsmethoden in der Wirkstoffforschung*. An understanding of the relationship between chemical structure and biologic activity is important in medicinal chemistry because it can aid in the design of new drugs. A variety of theoretical methods have been developed, and this book summarizes them, providing a comprehensive treatment of the field.

The following topics are treated: the formulation of problems; measures of biologic activity; extrathermodynamic approach to quantitative structure-activity analysis (Hansch analysis); hydrophobic effects on biologic activity; electronic influences on biologic activity; steric effects on biologic activity; interrelations of molecular parameters and the collinearity problem; practical aspects of quantitative structure-activity analysis by the extrathermodynamic approach (Hansch analysis); other approaches to quantitative structure-activity analysis with extrathermodynamic molecular parameters; noncomputer-assisted search operations on the basis of the extrathermodynamic approach; procedures with structural parameters; receptor mapping and pharmacophores; and response profiles. Mathematical details are presented to an extent necessary for understanding, and practical aspects are outlined with examples.

The book should be of interest to all scientists involved in drug research, both at universities and in industry.

520. Gudzinowicz, Benjamin J., and Michael J. Gudzinowicz. **Analysis of Drugs and Metabolites by Gas Chromatography-Mass Spectrometry**. New York: Marcel Dekker, 1977-. illus. bibliog. index. LC 76-56481. ISBN 0-8247-6576-1 (Volume 1). (To be complete in 9 volumes).

In the past 20 years, considerable progress has been made in the analysis of drugs and related toxicologic materials. This has been due, in part, to technologic advances in two specific types of analytic instrumentation, the types dealt with in this series of volumes. The objectives of this work are: (1) to compile from existing literature in a chronologic manner, the various GC and/or GC-MS procedures available for the analysis of specific drugs and their metabolites; (2) to describe all procedures; and (3) to indicate the results, precision, accuracy, and limits of detection achieved by a given procedure and also its applicability to pharmacokinetic studies.

The volumes published to date cover the following topics: (1) Respiratory gases, volatile anesthetics, ethyl alcohol, and related toxicologic materials; (2) Hypnotics, anticonvulsants, and sedatives; (3) Antipsychotic, antiemetic, and antidepressant drugs;

(4) Central nervous system stimulants; (5) Analgesics, local anesthetics, and antibiotics; (6) Cardiovascular, antihypertensive, hypoglycemic, and thyroid-related agents; (7) Natural, pyrolytic, and metabolic products of tobacco and marijuana.

521. Hartwell, Jonathan L. **Plants Used Against Cancer: A Survey**. Lawrence, MA: Quarterman Publications, 1982. 709p. bibliog. index. (Bioactive Plants, Volume 2). \$75.00. LC 81-85230. ISBN 0-88000-130-5.

This is a facsimile reproduction of a series of articles with the same title that appeared in the journal *Lloydia* (now called *Journal of Natural Products*, see entry 851) in 11 installments between 1967 and 1971. A foreword has been added. The original pagination has been preserved, but there is also continuous pagination.

The work was an ambitious undertaking. It lists virtually everything that had been known about the use of plants in the treatment of what has been presumed to be cancer. There are approximately 1000 literature references covering the period from 2900 B.C. to the midtwentieth century. The material is arranged in tables alphabetically by plant family name, genus, and species (about 3000 in all). Common name, parts of the plant used, preparations, and medicinal uses are indicated. The index is by genera.

The author of the foreword (Jim Duke) says he views the publication as an epitaph to the cancer-screening program that involved the National Cancer Institute and the U.S. Department of Agriculture for nearly 25 years. The Board of Scientific Counselors, Division of Cancer Treatment, National Cancer Institute, voted in October 1981 to abolish the NCI research contract program concerned with the development of antitumor agents from plants. Duke thinks that this unfortunately signals the end of government-sponsored research in the United States on medicinal plants, leaving the research to pharmaceutical firms, who have shown relatively little interest.

522. Holubek, Jiri, and Aldrich Strouf, eds. **Spectral Data and Physical Constants of Alkaloids**. London, England: Heyden and Son, Ltd., 1965-1973. 8 volumes. bibliog. index. \$400.00. ISBN 0-85501-070-3.

Ultraviolet and infrared spectroscopy have made a considerable contribution to the development of alkaloid chemistry. These techniques are extremely important for identifying and comparing isolated pure substances and precisely determining individual alkaloids. Use of these two techniques can lead to the classification of alkaloids into groups, and this work has made a contribution to that effort.

The set is made up of 1000 alkaloid data cards, 8½ x 11 inches in size, and filed in looseleaf binders. Each card describes one compound with appropriate spectral and physical data.

523. Hoppe, Heinz A. **Drogenkunde**. Bd. 1, Angiospermen. Bd. 2, Gymnospermen, Kryptogamen, Tierische Drogen. 8 Aufl. Berlin, Germany: Walter de Gruyter, 1975-77. 2 volumes. bibliog. index. \$181.00 (Volume 1). ISBN 3-11-003849-8; 3-11-006660-2.

This set lists alphabetically by Latin names vegetable drugs, with a short section in Volume 2 covering drugs of animal origin. A good deal of information is provided, including trade names, origin, habitat, constituents, uses, and many literature references. There are indices by generic and species names, trade names, popular names, and important constituents.

The work is intended primarily for the "druggist," as the Europeans use the term, rather than for the pharmacist.

524. Hoppe, Heinz A., Tore Levring, and Yukio Tanaka, eds. **Marine Algae in Pharmaceutical Science**. Berlin, Germany; New York: Walter de Gruyter, 1979-1982. 2 volumes. illus. bibliog. index. \$107.00; \$66.00. LC 79-4419. ISBN 3-11-00-7375-7; 3-11-00-8626-3.

Included in these volumes are articles from special symposia held in connection with the 9th and 10th International Seaweed Symposia.

Of recent years there has been a growing interest in the application of algae as potential sources of useful pharmaceutical substances. These volumes provide a survey of the current knowledge in this field.

Volume 1 presents 34 papers arranged in these sections: (1) General reviews; (2) Articles on special constituents of marine algae; and (3) Articles on selected algae and algal products.

Volume 2, a much shorter work, presents 14 articles under these headings: (1) A review (marine algae and their products and constituents); (2) Articles on special constituents of marine algae; and (3) Miscellaneous. Each volume has a taxonomic and a subject index.

525. Jolles, G., and K. R. H. Wooldridge, eds. **Drug Design: Fact or Fantasy?** London, England: Academic Press, 1984. 268p. illus. (part col.). bibliog. index. \$30.00. LC 83-70976. ISBN 0-12-388180-3.

This volume is based on the Proceedings of the Third Rhône-Poulenc Round Table, held at Eastbourne, England, in November 1982. The aim of the meeting was to determine to what extent modern tools offered by computers, mathematics, or new biologic theories could be used to design a new drug by logical thought and calculation and not rely so much on chance. Internationally known scientists from academic institutions and industry participated in the meeting. The book contains their presentations and also the main discussions of subgroups.

Titles of the contributions are: (1) Targeting of drugs; (2) The role of QSAR (quantitative structure-activity relationship) in drug design; (3) Computational chemistry and receptor characterization; (4) Designing prodrugs and bioprecursors; (5) Statistics and drug design; (6) Pattern recognition as a tool for drug design; (7) Pharmacological receptors and drug design; (8) The design and medicinal applications of transition state analogues; (9) The new look to QSAR; (10) The virtues of present strategies for drug discovery; and (11) Traditional or pragmatic research.

The following remarks sum up the discussions presented: "The two major forces in drug research are organic chemistry and pharmacology. It is the interaction of these two efforts that produces the fallout of 'screening.' The greatest possibilities for innovative drug discovery depend on an innovation in the test systems developed by the biochemists and pharmacologists: QSAR can influence the direction of organic synthesis but in the end it is the ingenuity of the synthetic organic chemist which produces the indispensable new compounds."

526. Karrer, Walter, **Konstitution und Vorkommen der organischen Pflanzenstoffe (exclusive Alkaloide)**. Basel, Switzerland: Birkhäuser Verlag, 1958. 1207p. bibliog. index. (Lehrbücher und Monographien aus dem Gebiete der exakten Wissenschaften. Chemische Reihe, Bd. 12). Supplement 1, 1977; Supplement 2, Part 1, 1981. About \$150.00-\$170.00 per volume.

A second edition of the main volume of this important reference work was published in 1976, but for the most part it only corrected errors found in the original

volume. Karrer died in 1961, but his work has been carried forward by E. Cherbuliez, C. H. Eugster, and H. Hürlimann in the supplementary volumes.

The work is a compilation of information about natural products from plants, not including the alkaloids. Presented are a list of monographs grouped by chemical classes. There are indices by plant names and plant products and by names of chemical compounds.

The monographs include the following information: names, molecular formula, structural formula, description, melting point and other physical data, and several literature references.

527. Knevel, Adelbert M., Frank E. DiGangi, and Stephen R. Byrn. **Quantitative Pharmaceutical Chemistry**. 7th ed. New York: McGraw-Hill, 1977. 518p. illus. bibliog. index. \$36.00. ISBN 0-07-035087-6. (1982 printing by Waveland Press, P.O. Box 400, Prospect Heights, IL 60070).

The first edition of this textbook, authored by the late Glenn L. Jenkins, appeared in 1931. It has enjoyed wide popularity among drug analysts, students, and teachers. The book is intended for use in instruction and also as a laboratory manual. The authors say that a course in quantitative pharmaceutical chemistry should meet certain objectives, and that they considered these when selecting material for the text. These objectives include providing students with: (1) knowledge of basic principles of the subject for use and interpretation of pharmaceutical methods of analysis, especially the official ones; (2) an opportunity to develop an awareness of drug quality and quality control; (3) basic principles of clinical laboratory methods so they may be informed when communicating with patients, physicians, and other health care professionals; and (4) basic chemical concepts required for the capstone courses still remaining in the pharmacy curriculum.

The 28 chapters of the book are arranged under these headings: (1) General methods used in official pharmaceutical analyses; (2) Special methods used in official pharmaceutical analyses; (3) Physicochemical and instrumental methods used in pharmaceutical analyses; and (4) Biomedical analytical chemistry. In addition, there are several useful appendices.

528. Loudon, G. Marc. **Organic Chemistry**. Reading, MA: Addison-Wesley Publishing, 1984. 1451p. illus. index. \$38.95. LC 83-7073. ISBN 0-201-14438-7.

The author of this organic chemistry textbook says he wrote it because he felt the need for a text that corresponded more closely to the course he teaches than existing texts did. His course is part of the curriculum of a school of pharmacy. Some of the features of the book include more than 1550 original problems; a number of brief historical essays, most of an anecdotal nature, intended to emphasize that chemistry is a human endeavor; many examples from biology; and a strong emphasis on stereochemistry.

Chapter headings are: (1) Structure and bonding I; (2) Alkanes; (3) Structure and bonding II; (4) Alkenes I; (5) Chemical equilibrium and reaction rates; (6) Alkenes II; (7) Stereochemistry I; (8) Cyclic compounds. Stereochemistry II; (9) Alkyl halides I; (10) Alkyl halides II; (11) Introduction of spectroscopy: nuclear magnetic resonance spectroscopy; (12) Alkynes; (13) Infrared spectroscopy; (14) Dienes and allylic functionality; (15) Benzene and aromatic chemistry; (16) Vinyl and aryl halides: ultraviolet spectroscopy; (17) Alcohols, phenols, and thiols I; (18) Alcohols, phenols and thiols II; (19) Ethers and sulfides; (20) Epoxides and glycols; (21) Aldehydes and

ketones; (22) Mass spectrometry; (23) Carboxylic acids; (24) Carboxylic acid derivatives: esters, acid halides, anhydrides, amides, and nitriles; (25) $\alpha\beta$ -unsaturated carbonyl compounds. An overview of organic synthesis; (26) Amines and other organic nitrogen compounds; (27) Naphthalene and the aromatic heterocycles; (28) Amino acids, peptides, and proteins; and (29) Carbohydrates and nucleic acids.

529. Manitto, Paolo. **Biosynthesis of Natural Products**. Translation editor: P. G. Sammes. Chichester, England: Ellis Horwood Limited; New York: John Wiley & Sons, 1981. 548p. illus. bibliog. index. \$114.95. LC 80-41739. ISBN 0-85312-061-5 (Ellis Horwood); 0-470-27100-0 (Halsted Press).

This comprehensive introduction to the intricacies of metabolism in plants and animals shows how nature employs simple and complex organic compounds to generate the rich and powerful store of natural products. Many of these complex natural products have physiologic properties. The author says his intent was to write a textbook covering basic biosynthetic topics to be used by chemistry students interested in biologic-organic trends, graduate chemists who wish to widen their vision of current biosynthetic problems and methodologies, and biologists and pharmacologists with a limited knowledge of organic chemistry who are interested in chemical aspects of secondary metabolism.

Chapter headings are: (1) Primary and secondary metabolism; (2) Enzyme reactions; (3) Primary and intermediate metabolism; (4) The polyketids; (5) The isoprenoids; (6) Biosynthesis of steroids; (7) The shikimate pathway; and (8) Phenylpropanoids. Appendices include: (1) Reaction mechanisms; (2) Principles of stereochemistry; (3) Non-classical carbocations; (4) Isotopic effects; (5) Key to numbering and classification of enzymes; and (6) Arrangements of order and families in Spermatophyta and alphabetical list of orders and families.

Each chapter is usually preceded by an introductory section, followed by complete, in-depth explanations. Many diagrams are used to illustrate the text. Research methods and techniques are probed, as well as isotopic tracer methods and the administration of labeled substrates.

The book has been criticized because it does not include more natural products (such as alkaloids) and because its documentation consists mainly of secondary sources.

530. Munson, James W., ed. **Pharmaceutical Analysis: Modern Methods**. Parts A-B. New York: Marcel Dekker, 1981-84. 2 volumes. (Drugs and the Pharmaceutical Sciences, Volume 11). \$55.00 (Volume 1); \$79.75 (Volume 2). LC 81-15171. ISBN 0-8247-15020 (Volume 1).

Although the pharmaceutical sciences are applied sciences, an investigator is always bringing basic sciences into play. For instance, chemical analyses are needed of drug molecules, degradation products, and metabolites. The editor of this work felt there was a need for an intermediate book on chemical analysis between the undergraduate text and the highly specific work on a very limited subject area. This book is intended to provide that intermediate level of coverage. The intended audience includes the graduate student studying pharmaceutical analysis and the researcher in another area wishing to increase his awareness of pharmaceutical analysis. Each chapter consists of a reasonably comprehensive discussion of applicable theory, instrumentation, and pharmaceutical applications.

Part A discusses these topics: (1) Gas chromatography: theory, instrumentation, and pharmaceutical applications; (2) Pyrolysis—gas chromatography; (3) Analysis of

drugs in biologic samples by combined gas chromatography-mass spectrometry; (4) Fluorescence and phosphorescence spectroscopy; (5) Principles of liquid scintillation counting; and (6) Radioimmunoassay and related immunoassay techniques. Part B covers the preparation of biologic samples for analysis; high-performance liquid chromatography; quantitative thin-layer chromatography; functional group analysis; flow injection analysis; electrochemical methods of analysis; atomic spectroscopy; and electronic absorption spectroscopy in the near ultraviolet and visible spectra.

531. **Natural Products Chemistry.** Edited by Koji Nakanishi, Toshio Goto, Shô Itô, Shinsaku Natori, and Shigeo Nozoe. Tokyo, Japan: Kodansha Ltd.; New York: Academic Press, 1974-. illus. bibliog. index. \$90.00 (Volume 3). ISBN 0-12-513901-2. (U.S. publisher for Volume 3 is University Science Books.).

When the first two volumes of this work were prepared, the editors felt that natural products chemistry had undergone explosive growth owing to advances in isolation techniques, synthetic methods, physicochemical measurements, and new concepts. It was becoming increasingly diversified and complicated, and the literature was widely scattered. By the time volume 3 was published in 1983, still more drastic changes had taken place. Rapid progress occurred in such fields as stereocontrolled reactions, syntheses employing elements other than carbon (e.g., silicon), organometallic reagents, and molecular mechanisms. Progress was also dramatic in the area of analytic instruments. These factors, together with the changes taking place in molecular biology, brought about changes in natural products chemistry. It had become more interdisciplinary with biology, biochemistry, pharmacology, medicine, and biophysics.

The aim of the three volumes published to date has been to fill the gap between textbooks and comprehensive treatises. They serve as convenient guides to important areas of the extremely broad field of natural products chemistry. Representative and significant topics have been presented. The text includes much visual material, especially structural formulas.

Volume contents are as follows: Volume 1—(1) Classification of natural products; (2) Physicochemical data; (3) Mono- and sesquiterpenes; (4) Diterpenes; (5) Sester-, tri-, and higher terpenoids; and (6) Steroids. Volume 2—(7) Fatty acid derivatives and related compounds; (8) Sugars (carbohydrates); (9) Carboaromatic and related compounds; (10) Alkaloids; (11) Non-alkaloidal nitrogen compounds; and (12) Aspects of natural products photochemistry. Volume 3—(1) ¹³C nuclear magnetic resonance techniques; (2) Mono- and sesquiterpenoids; (3) Di- and higher terpenoids; (4) Steroids; (5) Fatty acids and related compounds; (6) Sugars (carbohydrates); (7) Carboaromatic and related compounds; (8) Alkaloids; and (9) Non-alkaloidal nitrogen compounds.

532. Nogrady, Thomas. **Medicinal Chemistry: A Biochemical Approach.** New York: Oxford University Press, 1985. 449p. bibliog. index. \$47.50; \$27.95pa. LC 83-19362. ISBN 0-19-503394-X; 0-19-503400-7pa.

Departing from the approaches used in other medicinal chemistry texts, this one discusses drugs on the basis of their molecular targets and organizes the presentation according to the targets of drug action such as endogenous messengers and their receptors, membranes, enzymes, and DNA, among others. The book is intended for advanced pharmacy students and graduate students in pharmacology, medicinal chemists, pharmacologists, and biochemists. A knowledge of basic organic and biochemistry is assumed.

Chapter headings are: (1) Physicochemical principles of drug action; (2) Receptor-effector theories; (3) Methods of receptor characterization; (4) Drugs acting on neurotransmitters and their receptors; (5) Drugs acting on hormones, neurohormones and their receptors; (6) Non-messenger targets for drug action; (7) Drug distribution and metabolism; and (8) Principles of drug design. Appendices include a list of drugs arranged by generic name with solubility and pKa, average dose, and pharmacologic activity given; and a list of drugs arranged by pharmacologic activity is also included.

533. Ottenbrite, Raphael M., and George B. Butler, eds. **Anticancer and Interferon Agents: Synthesis and Properties**. New York: Marcel Dekker, 1984. 325p. illus. bibliog. index. (Drugs and the Pharmaceutical Sciences, Volume 24). \$69.75. LC 84-7006. ISBN 0-8247-7189-3.

The anticancer agents now in use have evolved from natural products and synthetic materials. Many chemists, however, are unaware of the potentially active anticancer and interferon agents. Therefore, this book has been compiled to familiarize them with cancer treatment, anticancer drug evaluation, anticancer drug administration, anticancer drug design, and research. The editors hope the readers of the book will gain a better understanding of anticancer agents and their potential and that it will stimulate chemists to become involved in the research to curb this dreaded disease.

Chapter headings are: (1) Principles of chemotherapy and immunotherapy; (2) Evaluation of potential antineoplastic agents; (3) Pharmacological evaluation of antineoplastic agents; (4) Novel antitumor agents from plants; (5) The chemistry and biochemistry of purine and pyrimidine nucleoside antiviral and antitumor agents; (6) Synthesis and characterization of nitrosoureas; (7) Metal complexes as antitumor agents; (8) Synthetic polyanionic polymers with interferon-inducing and antitumor activity; (9) Polynucleotides with interferon-inducing and antitumor activity; and (10) Interferon: its application and future as an antineoplastic agent.

534. Pelletier, S. William, ed. **Alkaloids: Chemical and Biological Perspectives**. New York: John Wiley & Sons, 1983-. bibliog. index. \$60.00-\$70.00 per volume. LC 82-11071. ISBN 0-471-08811-0 (Volume 1).

At this writing three volumes of this outstanding series have appeared. The editor is well known and highly respected among chemists and biologists interested in alkaloids. The purpose of the series is to provide comprehensive and authoritative reviews of the chemical and biologic properties of the various classes of alkaloids. The approach is intended to be interdisciplinary. Alkaloids were discovered about 175 years ago and have been the object of intensive study, particularly of recent years, because so many valuable medicines belong to this group. Dr. Pelletier feels that structure and not biogenetic origin should determine whether a compound is an alkaloid and has presented the following rather broad definition that will determine the scope of the compounds covered in the series: "An alkaloid is a cyclic organic compound containing nitrogen in a negative oxidation state which is of limited distribution among living organisms."

The series includes presentations by investigators in such diverse fields as medicinal chemistry, natural products chemistry, pharmacology, pharmacognosy, biochemistry, phytochemistry, plant taxonomy, oncology, forensic science, and medicine. Chapters on the following are included: structure elucidation, chemical properties, synthesis, biogenesis, pharmacology, physiology, taxonomy, spectroscopy, and x-ray crystallography of alkaloids.

It is planned that a new volume will be published every 12-18 months and that each will contain about 350-400 pages.

535. Phan, Trent, and Richard Wasnich. **Practical Nuclear Pharmacy**. 2nd rev. ed. Honolulu, HI: Banyan Enterprises, Ltd. (Cultural Plaza, P.O. Box 27825, Honolulu, HI 96827), 1981. 115p. illus. bibliog. index. \$8.95pa. LC 81-68197.

The first part of this book covers these topics: nuclear regulatory licensing, NRC inspection, FDA regulatory aspects, transportation of radiopharmaceuticals, central radiopharmacies, radionuclidic purity, radiochemical purity, sterility testing, pyrogen testing, radionuclide calibrator, pediatric dosage, and adverse reactions to radiopharmaceuticals.

The remainder of the book takes up radioactive products one by one with the following information usually provided in each monograph: preparation, quality control, biologic behavior, notes, and literature references.

536. Pratt, William B., and Raymond W. Ruddon. **The Anticancer Drugs**. New York: Oxford University Press, 1979. 323p. illus. bibliog. index. \$24.95; \$15.95pa. LC 79-913. ISBN 0-19-502565-2; 0-19-502566-0pa.

The purpose of this text is said to be "to present a full, but concise description of the anticancer drugs, both old and new." The information is drawn from the fields of pharmacology, biochemistry, molecular biology, cancer biology, and clinical oncology. Details of the action and adverse effects of the anticancer drugs are provided with extensive literature references. The authors have emphasized the rationale of chemotherapy with respect to the biology of the cancer cell and tumor growth kinetics, the biochemical mechanisms by which the drugs cause tumor cell death and by which cells become resistant to their effects, the pharmacology of the drugs, and the biochemical and pathophysiologic bases for toxic reactions and side effects. The book is not intended as a manual of therapeutics, but rather to provide insights into anticancer drugs under development and potential avenues for new drug design.

Chapter headings are: (1) The cancer problem; (2) Some milestones in the development of cancer chemotherapy; (3) Determinants of responsiveness to anticancer drugs; (4) Choice of drugs for cancer chemotherapy; (5) The alkylating agents; (6) The antimetabolites; (7) The antibiotics; (8) The steroid hormones; (9) Plant alkaloids, enzymes, and miscellaneous anticancer drugs; and (10) New drugs and new directions in cancer chemotherapy.

537. Remers, William A., ed. **Antineoplastic Agents**. New York: John Wiley & Sons, 1984. 269p. bibliog. index. (Chemistry and Pharmacology of Drugs, Volume 3). LC 83-12411. ISBN 0-471-08080-2.

The preface of this work provides an excellent short discussion of the status of antitumor drug research and its development at the present time. The editor concludes with the remark that he hopes the book will provide a guide and stimulus to chemists and pharmacologists in the area of cancer research. Despite the difficulties in curing many types of cancer, Dr. Remers says progress is being made in all the essential scientific areas, including tumor biology, screening methodology, drug design, and clinical evaluation.

The book presents a broad perspective on the problem of antineoplastic drug development. It provides a multidisciplinary approach to the subject and shows how the

disciplines of biology, pharmacology, and medicinal chemistry interact with one another. There are three monographs included as follows: (1) The cellular basis of cancer chemotherapy; (2) Screening systems; and (3) Chemistry of antitumor drugs. Each monograph includes a lengthy bibliography.

538. Robbins, Philip J. **Chromatography of Technetium-99m Radiopharmaceuticals—A Practical Guide**. New York: Society of Nuclear Medicine, 1984. 35p. illus. bibliog. \$16.00pa. LC 83-21972. ISBN 0-932004-18-0.

This manual has been designed to provide assistance to nuclear medicine personnel in implementing radiopharmaceutical quality-assurance programs. There are other publications that cover some of the methods described, but they either do not explain all the miniaturized rapid techniques or provide only one method to be applied to most of the radiopharmaceuticals. The manual is a guide to the current state of the art in miniaturized rapid chromatography for technetium-99m radiopharmaceuticals.

There are six sections: (1) Introduction (the nature and source of radiochemical impurities); (2) Paper and instant thin-layer chromatography (the principles of chromatography, classic techniques, and miniaturized methods); (3) Counting instruments for radiochromatography: use and limitations; (4) Materials and methods; (5) A list of each radiopharmaceutical product, along with USP criteria for radiochemical purity and typical scans of impure products; and (6) Standards and interlaboratory comparisons for chromatography systems. An appendix provides concise procedures.

The manual is useful to the physician, radiopharmacist, radiochemist, and nuclear medicine and radiologic technologists.

539. Robinson, Trevor. **The Organic Constituents of Higher Plants: Their Chemistry and Interrelationships**. 5th ed. North Amherst, MA: Cordus Press (P.O. Box 587, North Amherst, MA 01059), 1983. 353p. illus. bibliog. index. \$14.95. ISBN 0-935118-02-0.

Directed primarily toward botanists and pharmaceutical chemists, this book is a selective review reflecting the author's judgment in what is useful and important in the area of natural product chemistry. Robinson says he gives prominence to some classes of compounds considered relatively unimportant and that this is intentional because they have been neglected in the literature.

Chapter headings are: (1) Introduction; (2) Carbohydrates; (3) Water-soluble organic acids; (4) Aromatic compounds; (5) Saponifiable lipids; (6) Miscellaneous unsaponifiable lipids; (7) Miscellaneous volatile compounds; (8) Terpenoids and steroids; (9) Flavonoids and related compounds; (10) Amino acids; (11) Peptides; (12) Nucleic acids and derivatives; (13) Alkaloids; (14) Porphyrins; and (15) Miscellaneous nitrogen and sulfur compounds.

Information provided about each class of compound and the individual compounds usually includes a general discussion, structures, isolation, characterization, metabolic pathways, general references, and bibliography.

540. Sadtler Research Laboratories. **Commonly Abused Drugs (IR Grating Spectra)**. Philadelphia, PA: Sadtler Research Laboratories, 1972-. 2 volumes. Looseleaf. index. \$762.00.

This collection of Sadtler Reference Spectra has been developed to provide the chemist with a source of information in the identification of drugs. It contains spectra

of trade-name drugs that are commonly abused such as hallucinogens, stimulants, depressants, and narcotics. Each compound is indexed alphabetically by trade, generic, or chemical name and in the Grating Specfinder Index, which lists the spectra in sequence according to the location of their strongest absorption bands.

The collection contains 600 spectra. A brief description of the tablet or capsule is given with identifying markings and manufacturers' names included, if known.

541. Sadtler Research Laboratories. **Commonly Abused Drugs, Ultraviolet Spectra**. Philadelphia, PA: Sadtler Research Laboratories, 1972-. 1 volume. Looseleaf. index. \$210.00.

A companion volume to the IR Grating Spectra collection (entry 540), this volume contains 300 spectra corresponding to 166 different drugs. The compounds represented are predominantly brand-name drugs, as well as some street drugs. The data presented have been developed to provide the chemist with a rapid, preliminary method of characterizing drugs through a simple preparation technique, without the time required for procedures such as chromatographic separation. The technique, described in the publication, is not intended to identify active ingredients of a given product but to characterize the total compound.

The trade name and dosage form of each drug is shown with generic or chemical name when available. A brief description of the tablet or capsule is provided with the manufacturer's identifying marks when known. There are two indexes: (1) Alphabetical by trade, generic, or chemical name, and (2) The Ultraviolet Locator Index, which lists spectra in sequence according to the locations of their absorption maxima.

542. Sadtler Research Laboratories. **Pharmaceuticals: Prism Spectra (IR Grating Spectra)**. Philadelphia, PA: Sadtler Research Laboratories, 1972-. 4 volumes. Looseleaf. index. \$840.00.

This set contains 1200 absorption spectra of active principles of medicaments used in the manufacture of pharmaceutical preparations in the United States, Great Britain, Canada, France, and other countries.

There are several indexes: (1) Alphabetical by alternate names and corresponding prism spectrum numbers and grating spectrum numbers where applicable; (2) Molecular formula index; (3) Common use index; (4) Prism Specfinder (allows spectra to be located on the basis of the absorption peaks observed in their spectra); and (5) Numerical index (contains all alternative names of compounds in their prism number sequence).

543. Saha, Gopal B. **Fundamentals of Nuclear Pharmacy**. 2nd ed. New York: Springer-Verlag, 1984. 287p. illus. bibliog. index. \$29.50. LC 83-10381. ISBN 0-387-90882-X.

An outgrowth of a course in nuclear pharmacy, this book presents an overview of a number of topics related to the subject.

Chapter headings are: (1) The atom; (2) Radioactive decay; (3) Production of radionuclides; (4) Radionuclide generators; (5) Radiopharmaceuticals and instruments; (6) Radiolabeling of compounds; (7) Characteristics of specific radiopharmaceuticals; (8) Quality control of radiopharmaceuticals; (9) Nuclear pharmacy; (10) Radiation dosimetry, protection, and regulation; (11) In vitro and in vivo nonimaging tests; and (12) Use of radiopharmaceuticals in nuclear medicine. Review questions and answers are included with each chapter, and many literature references are provided.

The book can serve well as an introductory text in nuclear pharmacy, although some reviewers feel it would need to be supplemented with other materials.

544. Schirmer, Roger E. **Methods of Pharmaceutical Analysis**. Boca Raton, FL: CRC Press, 1982. 3 volumes. bibliog. index. \$81.00 (Volume 1); \$81.00 (Volume 2); \$72.00 (Volume 3). LC 81-9976. ISBN 0-8493-5244-4; 0-8493-5245-2; 0-8493-5246-0.

The objective of this work is to review the major instrumental methods of pharmaceutical analysis used especially in the pharmaceutical industry. In the foreword of each of the three volumes (it is identical in each volume), the author enumerates and describes the nature of the analytic problems involved in the development and marketing of a new drug or drug product. In addition, he outlines the tasks required to solve these problems. The importance of selecting the proper analytic method is emphasized. The format of each chapter in the work is similar in sequence: principles, instrumentation, experimental techniques and details, and pharmaceutical applications. The techniques may be applied to raw materials, drug intermediates, excipients, and impurities, as well as to the active drug alone or in formulations.

The contents of the volumes are as follows: Volume 1—(1) Separation of drugs from excipients; (2) UV and visible absorption techniques; (3) IF methods of analysis; (4) Fluorometric analysis; and (5) Optical rotation. Volume 2—(1) Nuclear magnetic resonance spectroscopy; (2) Polarography; and (3) Coulometry. Volume 3—(1) Gas-liquid chromatography; (2) High-performance liquid chromatography; (3) Thermal analysis; (4) Phase solubility analysis; and (5) The determination of isomeric purity. Extensive bibliographies are included throughout and many useful tables of data are provided.

The work is suitable for use in schools of pharmacy that have graduate programs in industrial pharmacy and/or pharmaceutical analysis, as well as for those in the pharmaceutical and related industries.

545. Smith, H. J., and Hywel Williams. **Introduction to the Principles of Drug Design**. Littleton, MA: John Wright PSG, 1983. 296p. illus. bibliog. index. \$23.50pa. LC 82-63048. ISBN 0-7236-0672-2.

The authors of this work are teachers at the Welsh School of Pharmacy. The book is intended for use in undergraduate pharmacy courses in medicinal chemistry and as an aid in courses in pharmacology and biochemistry where there is a need for a framework of information on basic drug design. Principles are emphasized rather than a comprehensive treatment of many classes of drugs.

Chapter headings are: (1) Processes of drug handling by the body; (2) The influence of formulation on drug availability; (3) Molecular size, shape, and ionization in drug action; (4) Design of enzyme inhibitors (antimetabolites) as drugs; (5) Metal complexation, isosteric modification and salt formation in drug design; (6) The chemotherapy of cancer; (7) Relationship of drug metabolism to drug design; (8) Quantitative structure-activity relationship and drug design; and (9) Design of antimicrobial chemotherapeutic agents.

Reviewers have given mixed opinions about the value of the book. British reviewers have been more pleased with it than American reviewers.

546. Taylor, J. B., and P. D. Kennewell. **Introductory Medicinal Chemistry**. Chichester, England: Ellis Horwood; New York: Halsted Press, 1981. 202p. illus. bibliog. index. \$59.95. LC 81-6703. ISBN 0-470-2752-X.

According to the authors, this book is intended to provide an introduction to the world of medicinal chemistry research for those scientists entering the field. The authors recognize that most entrants to the chemical research departments of pharmaceutical companies are organic chemists who may have limited knowledge of the biologic and pharmaceutical sciences.

Six chapters are presented. The first, an introduction, defines subject areas, provides a history of drug development, and classifies pharmacologic agents. Chapter 2, "The Pharmaceutical Phase," deals with drug formulations, routes of administration, and dosage forms. Chapter 3, "The Pharmacokinetic Phase," deals with the movement of drugs from entry into the body to receptor site. A summary of cellular components and functions is included. Chapter 4, on the pharmacodynamic phase, is concerned with the interaction of a drug with its site of action. Chapter 5, "Neurotransmitters and Receptors," gives a descriptive account of various aspects of the central and peripheral nervous systems. Chapter 6 deals with drug metabolism and outlines the various routes of elimination.

The book is concise and well written, providing a basic introduction, as was intended. The treatment is not comprehensive, but the complexities of the subject are adequately described.

547. Torssell, Kurt B. G. **Natural Product Chemistry: A Mechanistic and Biosynthetic Approach to Secondary Metabolism**. New York: John Wiley & Sons, 1983. 401p. illus. bibliog. index. \$54.95. LC 82-2045. ISBN 0-471-10378-0.

This work is evidently an updated version of *Basic Organic Chemistry, Part 4, Natural Products* by Tedder, et al., published in 1972 by Wiley. The new work has emphasized mechanisms of biosynthetic reactions.

There are eight chapters as follows: (1) Introduction and general considerations; (2) Carbohydrates and primary metabolites; (3) The shikimic acid pathway; (4) The polyketide pathway; (5) The mevalonic acid pathway: the terpenes; (6) Amino acids, peptides and proteins; (7) The alkaloids; and (8) N-heteroaromatics. Also included are problems and answers.

For the most part, reviewers have spoken favorably of the book, although it has been criticized for having too little coverage of the toxic, pharmacologic, and ecologic importance of natural products. The publisher has recommended the book as a reference work for research workers in the area of biosynthesis, but it also can be used as a textbook for a course in secondary natural product chemistry and biosynthesis.

548. Trease, George Edward, and William Charles Evans. **Pharmacognosy**. 12th ed. London, England: Baillière Tindall, 1983. 812p. illus. bibliog. index. £18.50. ISBN 0-7020-1007-3.

The first edition of this text appeared in 1934. The latest edition has been updated and new sections added since the eleventh edition appeared. In addition to the usual treatment in monograph form of the drugs used in modern medicine, some additional areas are covered, including plant cell culture, genetics, and analytic techniques as applied to medicinal secondary metabolites. In addition, there is a section devoted to a taxonomic key to *Chemical Abstracts* covering the literature of secondary plant constituents.

Section headings are as follows: (1) Introduction; (2) Plants and their structure; (3) From plant to phytopharmaceutical; (4) Orders and families of plants: recent research references; (5) Phytochemistry; (6) Drugs of biological origin; (7) Microscopical analysis

and commercial fibers; and (8) The microcomputer as an analytical aid in drug microscopy.

The plant monographs usually provide the following information about each plant: common and scientific names, sources, collection, preparation, characteristics, constituents, uses, history, and perhaps a photograph or drawing.

The book is the standard textbook on the subject in Great Britain. It is intended primarily for pharmacy students but may also be used as a reference source by phytochemists, analytic chemists, taxonomists, and others involved with medicinal plants.

549. Tyler, Varro E. **The Honest Herbal: A Sensible Guide to the Use of Herbs and Related Remedies**. Philadelphia, PA: George F. Stickley, 1982. 263p. illus. bibliog. index. \$14.50. LC 82-050206. ISBN 0-89313-055-9.

Written by a professional pharmacognosist who is also dean of a pharmacy school, this work provides authentic information about herbal remedies in language suitable for the general public. The author wrote the book because there has been so much inaccurate and deceptive information made available recently about the value of herbs. He does not promote self-medication but provides information that will permit it to be done as intelligently as possible, if the reader wants to do so in the first place. The book will allow consumers to decide for themselves, on the basis of recent scientific evidence, whether an herb they may be taking is really useful, worthless, or potentially hazardous.

The book begins with a chapter on the pros and cons regarding the use of herbs. The next chapter is on laws and regulations regarding the sale of drugs. The remainder of the book is made up of about 100 monographs on herbs and related remedies, arranged alphabetically by common name. Scientific names of the plants are included in a summary table. The monographs are usually a page or two in length, and each monograph includes several literature references. The last chapter provides a summarized evaluation of herbal remedies. Most of this information is in a long table that gives common name, source (scientific name of the plant), part used (juice, flower, root, etc.), principal uses, apparent efficacy, and probable safety.

This is a fascinating book, well written and interesting to read, as well as informative and accurate.

550. Tyler, Varro E., Lynn R. Brady, and James E. Robbers. **Pharmacognosy**. 8th ed. Philadelphia, PA: Lea & Febiger, 1981. 520p. illus. bibliog. index. \$31.50. LC 81-8162. ISBN 0-8121-0793-4.

Intended primarily as a textbook for pharmacy students, this is the standard text used in schools in the United States. It tells about plant and other crude drugs that enter commerce, their sources, their active ingredients, and uses. Older editions of the work generally contained more information about herbs than the more recent ones, but this latest edition has been revised to reflect certain changes in the needs of pharmacists. Because of the increasing interest shown by consumers in herbal medicine, megadose vitamin therapy, and "health" foods, pharmacists are called on to advise on the desirability of using such substances. A new chapter on "Herbs and Health Foods" has been included in this edition at the end of the book. Most of the better-known remedies are covered with information on their safety and efficacy. Legality of sale, an explanation of how the terms "natural" and "organic" are misused, and an assessment of the value of "health" foods are provided. Appended literature references are listed under two headings: "Authoritative Literature" and "Advocacy Literature."

Other chapters included in the book are: (1) General introduction; (2) Carbohydrates and related compounds; (3) Glycosides and tannins; (4) Lipids; (5) Volatile oils; (6) Resins and resin combinations; (7) Steroids; (8) Alkaloids; (9) Peptide hormones and the endocrine system; (10) Enzymes and other proteins; (11) Vitamins and vitamin-containing drugs; (12) Antibiotics; (13) Biologics; (14) Allergens and allergenic preparations; and (5) Poisonous plants.

The book is of high quality, written by experts who hold academic positions in pharmacognosy. It has considerable value as both a reference book and a textbook.

551. Williams, Sidney, ed. **Official Methods of Analysis of the Association of Analytical Chemists**. 14th ed. Arlington, VA: Association of Official Analytical Chemists (1111 N. 19th St., Arlington, VA 22209), 1984. 1141p. illus. bibliog. index. \$148.50. LC 20-21343 ISBN 0-935584-24-2.

The organization responsible for this work was originally called the Association of Official Agricultural Chemists; however, in keeping with the times, the name was later changed to the present one. The inclusion of materials other than agricultural has increased steadily since the first edition was published in 1920. The book has been a "bible" to the analytic chemist and those who need methods for analyzing almost any product. There is probably a predominance of methods for agricultural materials, foods, and drugs, however.

The book contains over 1700 methods, each with literature references for background and developmental materials. As would be expected, there is a noticeable increase in recent editions of the book of analytic methods requiring the newer instrumentation and automated technologies. The tenth to the present editions of the book should not be discarded when the next edition appears because they contain surplus methods that will not be reprinted.

The book is revised about every five years and is supplemented between editions by four annual updates, which are included in the purchase price.

Although never designated an official compendium by law or by regulation, this work has gradually earned the legal status of an authoritative text and has been accepted as such in court actions.

552. **Wilson and Gisvold's Textbook of Organic Medicinal and Pharmaceutical Chemistry**. Edited by Robert F. Doerge. 8th ed. Philadelphia, PA: J. B. Lippincott, 1982. 986p. illus. bibliog. index. \$49.50. LC 81-12385. ISBN 0-397-52092.

Thirteen noted contributors wrote this book for the undergraduate pharmacy student who has completed a regular year's course in the fundamentals of organic chemistry. It is also suitable for graduate students who have had no previous training in medicinal chemistry. Knowledge of physiology, physiologic chemistry, and pharmacology are essential, however, for maximum understanding of the presentations on therapeutic agents. The material is, in addition, of practical value to present-day pharmacists in their communication with patients and physicians. The discussions are based primarily on USP/NF drugs, but, in addition, drugs that are important from a historical point of view are included, as are promising new ones being reported in the scientific literature.

Chapter headings are: (1) Introduction; (2) Physicochemical properties in relation to biological action; (3) Metabolic changes of drugs and related organic compounds; (4) Anti-infective agents; (5) Sulfonamides, sulfones, and folate reductase inhibitors with

antibacterial action; (6) Antimalarials; (7) Antibiotics; (8) Antineoplastic agents; (9) Central nervous system depressants; (10) Central nervous system stimulants; (11) Adrenergic agents; (12) Cholinergic drugs and related agents; (13) Diuretics; (14) Cardiovascular agents; (15) Local anesthetic agents; (16) Histamine and antihistaminic agents; (17) Analgesic agents; (18) Steroids and therapeutically related compounds; (19) Carbohydrates; (20) Amino acids, proteins, enzymes, and peptide hormones; (21) Vitamins and related compounds; and (22) Miscellaneous organic pharmaceuticals. An appendix discusses pharmaceutical aids such as solvents and vehicles, flavors, aerosol propellants, synthetic sweetening agents, acidifying agents, alcohol denaturants, tablet lubricants, antioxidants, synthetic suspending agents, and surfactants and emulsifying aids. Another appendix lists the pKa values of drugs and reference compounds.

The book has been well received.

16 Pharmacology and Toxicology

The term "pharmacology" was originally used in a general sense to refer to the study of drugs, including their origin, composition, properties, effects, uses, preparation, and administration. It is still sometimes used in that sense, but in modern times the term is used increasingly to describe that area of the pharmaceutical field concerned with the physiologic effects of drugs (also sometimes known as "pharmacodynamics"). It is used here in the latter sense. Pharmacology is closely related to physiology and to toxicology, and this section includes toxicologic publications. However, works on the toxicology of environmental agents have for the most part been excluded. Although the field of toxicology deals with physical and biologic (plant and animal toxins) as well as chemical hazards to man and animals, chemicals have been emphasized in this bibliography.

Several titles covering veterinary pharmacology and toxicology have been listed among the other titles emphasizing human pharmacology or toxicology.

A large percentage of the titles listed here deal with pharmacology or toxicology in general. More specialized areas of pharmacology are also dealt with in some of the works, for instance, chemical pharmacology, psychopharmacology, neuropharmacology, neuropsychopharmacology, radiopharmacology, and pediatric pharmacology. In addition, specialized areas of toxicology are also dealt with such as clinical toxicology, drug toxicity, toxicology of the eye, and forensic toxicology.

Other topics considered include selective toxic agents, therapeutic drug monitoring, drug treatment of disease, disposition of toxic drugs and chemicals, animal experimentation, drug-induced diseases, targeting of drugs, drug metabolism, receptors, and mechanisms of drug action.

Although most reference works are treated in part 1 of this bibliography, a few specialized reference titles are listed in this section. There are two titles on toxic effects of materials, *Registry of Toxic Effects of Chemical Substances* (entry 611) and Sax's *Dangerous Properties of Industrial Materials* (entry 614). In addition, there are two works included on carcinogenic substances, Sax's *Cancer Causing Chemicals* (entry 613) and the U.S. National Institutes of Health's *Survey of Compounds Which Have Been Tested for Carcinogenic Activity* (entry 619). One title deals with teratogens, Shepard's *Catalog of Teratogenic Agents* (entry 615).

553. Albert, Adrien. **Selective Toxicity: The Physico-Chemical Basis of Therapy.** 7th ed. London, England: Chapman and Hall, 1985. 750p. illus. bibliog. index. \$69.95; \$34.95pa. LC 84-7781. ISBN 0-412-26010-7; 0-412-26020-4pa.

The title of this work is perhaps misleading; it is not a text on toxicology, but rather is about selective toxic agents, substances that affect certain cells without harming others. This subject covers an immense field: drugs for treating illnesses in man and animals, as well as fungicides, insecticides, and weed killers. The book is concerned with the physical and chemical means by which selectivity is accomplished; that is, it is a study in molecular pharmacology.

The text is presented in two parts: topics of general interest and in-depth studies of topics from Part 1. Chapter headings are: (1) Selectivity in the service of man; (2) Steps in the correlation of structure with biological action; (3) Comparative distribution: the first principle of selectivity; (4) Comparative biochemistry: the second principle of selectivity; (5) Comparative cytology: the third principle of selectivity; (6) Chemotherapy: history and principles; (7) Pharmacodynamics; (8) The forces available for binding an agent. Chemical bonds. Adsorption; (9) Anti-metabolites: antagonistic analogues of coenzymes and enzymic substrates; (10) Ionization; (11) Metal-binding substances; (12) Steric factors; (13) The covalent bond in selective toxicity; (14) Surface chemistry. The modification of membranes by surface-active agents; (15) Biological activity unrelated to structure; (16) The perfection of a discovery; and (17) Some numerical assistance.

The book has been highly recommended.

554. Alexander, Frank. **An Introduction to Veterinary Pharmacology.** 3rd ed. London, England: Churchill Livingstone, 1976. 382p. bibliog. index. \$19.50pa. LC 75-31758. ISBN 0-443-01168-0.

The object of this book is to provide the veterinary student with a concise account of the pharmacologic properties of the principal drugs used in treating and preventing disease in domestic animals. Whenever possible the fate of drugs in the different domestic species has been discussed.

The contents of the book is as follows: (1) Introduction and general principles of drug administration; (2) Water, electrolyte metabolism, and replacement fluids; (3) Drugs affecting fluid and electrolyte balance; (4) Inorganic metabolism; (5) Drugs affecting tissue metabolism; (6) Pharmacology of the automatic nervous system; (7-8) Depressants of the CNS; (9) Stimulants of the CNS; (10) Local analgesic agents; (11-12) Drugs acting on the alimentary system; (13) Drugs acting on the circulatory system; (14) Drugs acting on the respiratory system; (15) Antipyretics and anti-inflammatory agents; (16) Autocoids; (17) Drugs acting on the reproductive system; (18) Drugs acting on the skin; (19) Heavy metals, metalloids, and their antagonists; (20) Chemotherapy;

(21-22) Chemotherapy of bacterial infections; (23) Chemotherapy of protozoal infections; (24) Chemotherapy of helminth infections; (25-26) Chemotherapy of insect infestations; (27) Disinfectants; and (28) Tumor chemotherapy.

555. Arena, Jay M. **Poisoning: Toxicology, Symptoms, Treatments**. 4th ed. Springfield, IL: Charles C. Thomas, 1979. 827p. bibliog. index. (American Lecture Series, Publication No. 1019; a Monograph in the Bannerstone Division of American Lectures in Living Chemistry). \$49.00. LC 78-5382. ISBN 0-398-03767-1.

This well-established reference work is for those who are responsible for diagnosing and treating poison cases. It is useful in a number of situations such as poison control centers, emergency rooms of hospitals, and to pharmacists.

Chapter headings are: (1) General considerations of poisoning; (2) Insecticides; (3) Rodenticides, fungicides, herbicides, fumigants; (4) Industrial hazards; (5) Occupational hazards; (6) Drugs (a long section of about 175 pages with some drugs listed in tables and some in separate monographs); (7) Soaps, detergent, polishing and sanitizing agents; (8) Cosmetics and toilet articles; (9) Poisonous plants, reptiles, arthropods, insects and fish; (10) Miscellaneous compounds; and (11) Public safety education. Appended is a list of pamphlets and other materials on the various aspects of poisoning and also a section of normal laboratory values used in the diagnosis and treatment of poisoning (a table with some text material).

This is an encyclopedic work, a very complete listing that includes many substances.

556. Atkinson, Arthur J., Jr., and John J. Ambre. **Kalman and Clark's Drug Assay: The Strategy of Therapeutic Drug Monitoring**. 2nd ed. Chicago, IL: Year Book Medical Publishers, 1984. 188p. illus. bibliog. index. \$29.50. LC 84-14325. ISBN 0-89352-216-3.

The first edition of this book, published in 1979, was written in response to the continued growth of therapeutic drug monitoring. Today this combination of analytic methodology and clinical pharmacology is an accepted part of medical practice. The book is intended for medical scientists and clinicians interested in the determination and interpretation of drug concentrations in blood and other biologic fluids.

The first chapter discusses the rationale and principles of the subject. The next few chapters cover various drugs or classes of drugs as follows: digoxin and digitoxin, theophylline and caffeine, antiepileptic drugs, antiarrhythmic drugs, antidepressant drugs, aspirin and other salicylates, and methotrexate. The next chapter is on drug screening, and the last chapter presents techniques for therapeutic monitoring and toxicology. There is, in addition, an appendix chart giving pharmacokinetic parameters of some commonly monitored drugs.

557. Avery, Graeme S., ed. **Drug Treatment: Principles and Practice of Clinical Pharmacology and Therapeutics**. 2nd ed. Sydney, Australia: ADIS Press, 1980. 1382p. bibliog. index. \$49.50. ISBN 0-909337-08-X.

Aimed at the student and practicing clinician, this book discusses the use and effects of drugs within a disease-oriented context. This edition has given more emphasis to the pharmacologic properties of drugs than the first edition did.

There are three sections: (1) Clinical pharmacology; (2) Therapeutics; and (3) Appendices. The section on therapeutics, which is the longest, is arranged by clinical classification with separate chapters on each organ system or disease category. The disease or condition is described, and the effects of each suitable drug are discussed.

There are many tables listing the drugs with their properties so that a comparison can be made easily.

The work has been well received as a reference source on many aspects of drug use.

558. Baggot, J. Desmond. **Principles of Drug Disposition in Domestic Animals: The Basis of Veterinary Clinical Pharmacology**. Philadelphia, PA: W. B. Saunders, 1977. 238p. bibliog. index. \$16.00. LC 76-54036. ISBN 0-7216-1473-6.

The author of this textbook says that despite the widespread use of drugs in domestic animals, most schools of veterinary medicine have neglected clinical pharmacology in their curricula. He thinks this is unfortunate because species differences in response to drugs can be attributed to several factors, making veterinary clinical pharmacology a complex discipline. He developed this book because of this lack of coverage of the subject.

These chapters are presented: (1) General principles governing translocation of drugs; (2) The absorption of drugs: bioavailability; (3) Drug distribution; (4) Comparative patterns of drug biotransformation; (5) Mechanics of drug excretion; (6) Principles of pharmacokinetics; (7) Some important principles of drug dosage; and (8) Drug therapy in the neonatal animal. Included is a glossary of mathematical symbols to assist in interpreting the formulas in the text.

559. Barlow, R. B. **Quantitative Aspects of Chemical Pharmacology: Chemical Ideas in Drug Action with Numerical Examples**. Baltimore, MD: University Park Press, 1980. 250p. illus. bibliog. index. \$80.00. LC 78-22545. ISBN 0-8391-1388-9.

Gathered together in this book are chemical ideas that are important for understanding how drugs act and how new drugs may be developed. The book considers how chemical properties relate quantitatively to biologic activity and to the prediction of the activity of new compounds. Included are numerical problems taken from research work.

Chapter headings are: (1) Measuring drug activity; (2) Physicochemical problems; (3) The size and shape of molecules; (4) Chemical processes where size and shape are important; and (5) The prediction of drug activity.

The book has been recommended as a text for undergraduates in pharmacy and pharmacology. In spite of its small size it is said to have achieved a considerable level of depth and understanding.

560. Baselt, Randall C. **Disposition of Toxic Drugs and Chemicals in Man**. 2nd ed. Davis, CA: Biomedical Publications, 1982. 795p. bibliog. index. \$49.50. LC 81-66543. ISBN 0-931890-08-X.

The purpose of this compilation is to present a convenient source of current essential information on the disposition of chemicals and drugs most frequently encountered in cases of human poisoning. Considerably larger than the first edition, this one lists 305 substances, including drugs, pesticides, metals, and solvents. The monographs are arranged alphabetically by the generic name of the substance. Each monograph includes half-life of the substance, volume of distribution, structural formula, fraction that is protein-bound, pKa, occurrence and usage, blood concentrations, metabolism and excretion, toxicity, analyses, and a number of supporting references.

The work is of value to toxicologists, pharmacologists, clinical chemists, pathologists, and others who need to conduct assays for materials in specimens of human origin or to interpret analytic data from such tests.

561. Beckman, Harry. **Dilemmas in Drug Therapy**. Philadelphia, PA: W. B. Saunders, 1967. 404p. bibliog. index. \$104.00. LC 67-10428. ISBN 0-8357-9541-1. (Available from Books on Demand, University Microfilms International, Ann Arbor, MI).

In his preface Beckman (an M.D. pharmacologist) says that as a hospital consultant on drugs, he was asked such questions as: "Here is a patient and these are the circumstances. This drug has failed and so has that. Who has used another one instead and why? What are the risks? Is there something I should know and do not? What would you do?"

Beckman has collected in this work answers to such queries. The material is arranged alphabetically by the name of the disease or condition. The book uses a question-and-answer format, with literature citations provided.

Although the book is older and newer drugs are now available, it is still considered valuable.

562. Bernstein, Jerrold G., ed. **Clinical Psychopharmacology**. 2nd ed. Boston, MA: John Wright-PSG, 1984. 273p. illus. bibliog. index. \$23.00. LC 83-10328. ISBN 0-7236-7030-7.

Bernstein believes that all clinicians working with patients must understand psychotropic medications. He hopes that this book will be of value in achieving this goal. It is an outgrowth of a series of symposia sponsored by the Human Resource Institute.

Chapter titles are: (1) Psychotherapy and pharmacotherapy; (2) Legal and ethical aspects of psychopharmacologic practice; (3) The psychiatric laboratory; (4) Neurotransmitters and receptors in pharmacopsychiatry; (5) Evaluation and treatment of the refractory depressed patient; (6) The treatment of panic and phobic disorders; (7) Lithium: clinical use, toxicology and mode of action; (8) Rational use of antipsychotic drugs; (9) Insomnia: diagnosis and treatment; (10) Overview of clinical psychopharmacology in childhood disorders; (11) Psychotropic medications and mentally retarded patients; and (12) Pharmacologic management of the elderly patient.

563. Bevan, John A., and Jeremy H. Thompson, eds. **Essentials of Pharmacology**. 3rd ed. Philadelphia, PA: Harper and Row, 1983. 916p. bibliog. index. \$35.00. LC 82-23996. ISBN 0-06-141462-4.

A general textbook of pharmacology, this work is suitable for undergraduate students in medicine, dentistry, veterinary medicine, and pharmacy. There are 83 chapters prepared by 54 contributors.

The chapters are arranged under these headings: (1) General pharmacology and pharmacologic principles; (2) Systematic pharmacology; and (3) Special topics and reference material. The second section makes up about two thirds of the book. There are subsections in it as follows: (1) Drugs acting predominantly on the peripheral nervous system; (2) Drugs acting predominantly on the central nervous system; (3) Drugs acting predominantly on the cardiovascular system; (4) Drugs acting predominantly on the gastrointestinal, genitourinary, and hematopoietic systems;

(5) Autacoids and related drugs; and (6) Chemotherapy of infection and neoplasia. Attention is paid to mechanisms of action, effects, and clinical uses. There are useful chapters in the third part of the book that include: "General Principles of Treatment of Poisons and Their Available Antidotes," "Vitamins," and "Therapeutic Agents Available in Europe That Have Not Been Released in the United States."

Unusual features of the book include review questions at the end of chapters and footnoted historical comments throughout.

564. Booth, Nicholas H., and Leslie E. McDonald, eds. **Veterinary Pharmacology and Therapeutics**. 5th ed. Ames, IA: Iowa State University Press, 1982. illus. bibliog. index. \$61.95. LC 82-246. ISBN 0-8138-1740-4.

Although directed to the professional student in veterinary medicine, this book also will serve as a valuable reference work for practicing veterinarians and those in such disciplines as laboratory animal medicine and biologic research. Considerable space has been devoted to veterinary toxicology, molecular pharmacology, and drug residues in food products derived from animals. The treatment of diseases of exotic species and laboratory animals is included.

The presentation begins with a section on pharmacodynamics. The remainder of the 18 sections discuss drugs classified primarily on organ systems, although there are also sections on chemotherapy of microbial, fungal, and viral diseases, treatment of neoplasia, and nutritional pharmacology.

The work has been very well received.

565. Bowman, W. C., and M. J. Rand. **Textbook of Pharmacology**. 2nd ed. Oxford, England: Blackwell Scientific Publications, 1980. 1912p. illus. bibliog. index. \$72.00. LC 79-40690. ISBN 0-632-09990-9.

The authors of this comprehensive text hold academic positions in the United Kingdom and Australia. The work is particularly suitable for the pharmacy student. The focus of the text is on the scientific basis of pharmacology, and it differs from other texts on the subject in that it presents the subject in the context of chemistry, biochemistry, molecular biology, embryology, physiology, pathology, immunology, and microbiology. Medical schools teach separate courses in these subjects, so the book serves them differently, perhaps providing a framework for integration of the subjects.

This edition of the book includes new sections on pharmacokinetics, endocrinology, the chemotherapy of infections and cancer, skin disorders, drugs of abuse, and pharmacologically active constituents of foods. Some material included is not commonly found in pharmacology texts, for example, quantitative evaluation and statistical analysis of drug action.

566. Brander, G. C., D. M. Pugh, and R. J. Bywater. **Veterinary Applied Pharmacology and Therapeutics**. 4th ed. London, England: Baillière Tindall, 1982. 528p. bibliog. index. \$56.00. ISBN 0-7020-0871-0.

This is primarily a textbook for the student of veterinary medicine, but it contains information of value to postgraduate students of pharmacology and the practicing veterinary surgeon who needs to be aware of the benefits and risks of new drugs.

The book first discusses general principles of pharmacology. Part 2 covers drugs used in the modification of cell, tissue, organ, and system functions. Part 3 is on the control of infectious diseases and chemotherapy. Part 4 discusses the essentials of pharmacy in veterinary practice. The last section of appendices includes subsections on

Latin abbreviations, weights and measures, and notes on the treatment of poisoning. There are several indices: a list of generic and proprietary names of drugs, a therapeutic and pharmacologic index, and a general index.

567. **Casarett and Doull's Toxicology: The Basic Science of Poisons.** Edited by John Doull, Curtis D. Klaassen, and Mary O. Amdur. 2nd ed. New York: Macmillan Publishing, 1980. 778p. bibliog. index. \$38.95. LC 79-18632. ISBN 0-02-330040-X.

Designed primarily as a textbook for, or as an adjunct to, courses in toxicology, this work provides an in-depth comprehensive coverage of the broad topic of toxicology. The book is of value to researchers in the field, as well as to students and teachers.

The material is divided into five units: (1) General principles of toxicology; (2) Systemic toxicology; (3) Toxic agents; (4) Environmental toxicology; and (5) Applications of toxicology. The first unit covers history, evaluation, pharmacokinetics of toxicants, chemical carcinogens, genetic toxicology, and teratogens. In Unit 2 the chapters are divided with respect to the various physiologic systems, including toxic responses of the central nervous system, liver, kidney, respiratory system, eye, blood, and reproductive system. Unit 3 presents chapters on pesticides, metals, solvents and vapors, radiation and radioactive materials, plastics, and toxins of animal and plant origin. Unit 4 covers food additives and contaminants, air pollutants, and water and soil pollutants. The last unit deals with these applications of toxicology: forensic, clinical, occupational, regulatory, and the law.

568. Clarke, Myra L., D. G. Harvey, and D. J. Humphreys. **Veterinary Toxicology.** 2nd ed. London, England: Baillière Tindall, 1981. 328p. bibliog. index. \$51.00. ISBN 0-7020-0862-1.

This book first appeared in 1912, written by G. D. Lander. It has been revised and rewritten and is recognized worldwide as a valuable book on the subject. Although intended mainly as a textbook for students and a source of information for practitioners, it also can serve as a text for the research worker.

Following are the chapter headings: (1) Introduction; (2) Mineral or inorganic substances; (3) Toxic gases and vapours; (4) Organic compounds, I. Drugs; (5) Organic compounds, II. Pesticides; (6) Organic compounds, III. Miscellaneous; (7) Poisonous plants; (8) Mycotoxins; (9) Venomous bites and stings; doping; and (10) Radio-active materials. Appendices include: (1) References; (2) Effect of pesticides and herbicides on honey bees; (3) Effects of pesticides and herbicides on fish; (4) Plant species associated with teratogenic effects, infertility and abortions; and (5) Carcinogenesis.

569. Colombetti, Lelio G., ed. **Principles of Radiopharmacology.** Boca Raton, FL: CRC Press, 1979. 3 volumes. illus. bibliog. index. LC 78-27853. ISBN 0-8493-5465-X; 0-8493-5466-8; 0-8493-5467-6.

Radiotracers have become important in medicine of recent years, and there are now many teaching programs in radiopharmacy that demonstrate the practical utility of these substances. Radiotracers have been used to solve a variety of diagnostic problems. A somewhat neglected area in the medical application of radiotracers has been the study of mechanisms by which the radiotracers are transported in a biologic system, the mechanisms of localization of radiotracers in the cell, and the metabolic pathways of radiotracers. These are important aspects in learning how to create more specifically labeled compounds. This book, an outgrowth of a symposium, is intended to be used as

a reference work by those involved in the development of new radiotracers and also to serve as a textbook in teaching radiopharmacology to science and medical students.

The work, which is in three volumes, consists of these five major parts: (1) Radiopharmacology techniques; (2) Radiotracer design; (3) Basic radiotracer and reporter properties; (4) Biological transport of radiotracers; and (5) Mechanisms of localization of radiotracers.

570. Cooper, Jack R., Floyd E. Bloom, and Robert H. Roth. **The Biochemical Basis of Neuropharmacology**. 4th ed. New York: Oxford University Press, 1982. 367p. illus. bibliog. index. \$21.95; \$12.95pa. LC 82-3475. ISBN 0-19-503093-1; 0-19-503094-Xpa.

First published in 1970, this book is a good introductory text for those who wish to learn about the field of neuropharmacology and neurotransmitters. The domain of neuropharmacology has been defined in the text as including psychotropic drugs that affect mood and behavior, anesthetics, sedatives, hypnotics, narcotics, anticonvulsants, analeptics, analgesics, and a variety of drugs that affect the autonomic nervous system. The book concentrates on the biochemistry and physiology of nervous tissue, emphasizing neurotransmitters, and introduces the neuropharmacologic agents where their action is related to the subject being considered.

Chapter headings are: (1) Introduction; (2) Cellular foundations of neuropharmacology; (3) Metabolism in the central nervous system; (4) Receptors; (5) Acetylcholine; (6) Catecholamines I: General aspects; (7) Catecholamines II: CNS aspects; (8) Serotonin; (9) Amino acids; (10) Neuroactive peptides; (11) Endorphins; and (12) Cyclic nucleotides, prostaglandins, and histamine.

The book is readable and concise, and it has been well received.

571. Cooper, Peter. **Poisoning by Drugs and Chemicals, Plants and Animals**. 3rd ed. Rev. and enl. An Alchemist Publication; distr. Year Book Medical Publishers, 1974. 218p. bibliog. index. \$13.95pa. LC 73-92063. ISBN 0-8151-1860-0.

There continues to be careless/willful mishandling of drugs and chemicals, and new abuses of drugs come to light constantly. The author of this book offers it to members of interested professions such as physicians and pharmacists.

Preliminary material presented (called appendices) provide a brief guide to major conditions that require medical treatment. The author advises medical treatment but realizes that it may not always be available. The toxic substances are listed alphabetically by the most common name. The information provided varies according to whether the substance is a drug, plant, or animal poison, but the following is usually given: synonymous names, action, absorption and excretion, toxic effects, possible effects of massive overdose, suggested treatment, and aids to identification.

The following indices are included: general, plant species, and animal species. Literature references are provided in the monographs in many cases.

572. Craig, Charles R., and Robert E. Stitzel, eds. **Modern Pharmacology**. Boston, MA: Little, Brown, 1982. 1038p. illus. bibliog. index. \$36.50. LC 81-82381. ISBN 0-316-15924-7.

Intended for faculty and students in the health sciences, this textbook is designed to fill the gap between exhaustive reference works and short, more simplistic texts that may deprive the reader of fundamental background in the field. It is quite readable.

The book contains 72 chapters arranged under these headings: (1) General principles of pharmacology; (2) Drugs affecting the autonomic nervous system;

(3) Cardiovascular drugs; (4) Central nervous system drugs; (5) Chemotherapy; (6) Drugs affecting the endocrine system; and (7) Additional important drugs.

Most of the contributors to the volume hold a Ph.D. rather than an M.D., and the book has been criticized because of a lack of medical relevance in some chapters.

573. Crouthamel, William, and Allen C. Sarapu, eds. **Animal Models for Oral Drug Delivery in Man: In Situ and In Vivo Approaches**. Washington, DC: American Pharmaceutical Association, Academy of Pharmaceutical Sciences, 1983. 179p. bibliog. \$54.00.

Based on a symposium held in 1980, this book contains updated material written by various authorities in the field. It is partly a theoretical presentation intended to represent current thinking in the area of animal modeling.

The first chapter discusses the elements of drug absorption in theoretical terms. Chapter 2, a long chapter, discusses more applied aspects. Chapter 3 covers the application of this methodology to absorption studies in the dog during new drug development. Chapter 4 covers bioavailability, and Chapter 6 presents a regulatory outlook for the potential use of animal studies in New Drug Application submissions.

Probably the most authoritative book on the subject, *Animal Models* is welcome and useful and could make planning animal experimentation more rational.

574. Csáky, T. Z., and Byron A. Barnes. **Cutting's Handbook of Pharmacology: The Actions and Uses of Drugs**. 7th ed. Norwalk, CT: Appleton-Century-Crofts, 1984. 786p. bibliog. index. \$18.95pa. LC 82-21459. ISBN 0-8385-1418-9.

A unique feature of this handbook is the presentation of the relationship between the chemical structure and the pharmacologic action of a large number of drugs. The work consists of 21 parts, each on a different group of drugs arranged in classified order. The sections typically begin with a general discussion of the drug group with history, chemistry, action, mechanisms, pharmacodynamics, toxicity, and usage given in concise fashion. The individual drugs are then listed with chemical structure and dose and perhaps with a short description and usage indications.

Section headings are antibacterial chemotherapy, antifungal agents, antiprotozoal chemotherapy, antimetazoal agents, cancer and virus chemotherapy, topical agents, antidotes, cardiovascular agents, smooth muscle agents, agents affecting the blood, alimentary tract drugs, diagnostic agents, immunologic agents, hormones and other autacoids, nutritional factors, autonomic nervous system agents, ganglionic and myoneural agents, anesthetics, analgesics, sedatives and related agents, and stimulants and addicting agents.

The intended audience includes pharmacologists, pharmacists, students, and practitioners.

575. D'Arcy, P. F., and J. P. Griffin. **Drug-Induced Emergencies**. Bristol, England: John Wright and Sons, 1980. 389p. bibliog. index. ISBN 0-7236-0522-X.

There are several circumstances that may bring about a drug-induced emergency such as (1) a patient-related factor (e.g., a pathologic abnormality); (2) the interaction of drugs administered simultaneously; or (3) the intrinsic toxicity of the drug. Individuals in the front line of medical treatment will be interested in this book for its comprehensive picture of these emergencies, which are described as to their incidence, treatment, and prevention.

The following are the chapter headings: (1) Introduction: the milieu of the emergency; (2) Some genetic factors underlying drug-induced emergencies; (3) Drug interactions presenting life-threatening emergencies; (4) Emergencies in the course of intravenous fluid therapy; (5) Allergic and anaphylactic drug-induced emergencies; (6) Drug-induced emergencies in anaesthetic practice; (7) Drug-induced emergencies presenting as acute surgical problems; (8) Acute drug-induced disorders of the nervous system, Part 1. Acute drug-induced neurological syndromes; (9) Acute drug-induced disorders of the nervous system, Part 2. Acute drug-induced psychiatric syndromes; (10) Hypnotics and skilled work; (11) Acute poisoning caused by drugs in excessive dosage; (12) Drug-induced haematological emergencies, Part 1. Drug-induced cytopenias; (13) Drug-induced haematological emergencies, Part 2. Drug-induced disorders of coagulation; (14) Acute problems due to drug-induced or exacerbated infections; (15) Drug-induced cardiovascular emergencies; and (16) Oculotoxicity and ototoxicity.

Although a British book, the index of official and proprietary drug names includes proprietary names used in the United States.

576. D'Arcy, P. F., and J. P. Griffin. **Iatrogenic Diseases**. 2nd ed. Oxford, England: Oxford University Press, 1979. 546p. illus. (part col.). bibliog. index. \$67.50. LC 78-40332. ISBN 0-19-264179-4.

There has been increasing awareness that therapeutic substances must be judged on the basis of both the benefits and the risks. It is also recognized that the use of any therapeutic agent is attended by at least a small risk. This book, a valuable handbook and text for pharmacologists, pharmacists, general practitioners, and medical students, classifies drug-induced reactions into a systematic pathologic approach. There are 26 chapters, each on a different type of iatrogenic disorder. Appendices include a drug interaction table and a cross-index of official and proprietary drug names.

Several annual update volumes have been issued since 1981 which summarize literature that has appeared since the main volume was published.

577. Deichman, William B., and Horace W. Gerarde. **Toxicology of Drugs and Chemicals**. 4th ed. New York: Academic Press, 1969. 805p. bibliog. index. LC 69-12282.

This ready reference book is designed to present data on side effects of drugs and toxicity of industrial chemicals and to make recommendations for the treatment of undesirable effects and overdoses.

The first chapters cover first aid and general suggestions for treatment, drugs and adult dosages for the treatment of intoxications, and supportive treatment. The next section, which makes up most of the book, lists the compounds and nonproprietary names of drugs alphabetically. The monographs include such information as other names for the substances, use, cautions, treatment, and references to the literature. The last section presents 68 tabular summaries. The index lists drugs under their proprietary names and also includes those organs or systems primarily affected by a particular substance.

The work was prepared primarily for physicians, but teachers of chemistry, biochemistry, pharmacology, toxicology, and industrial medicine have also used it, as have members of Poison Control Centers and those who are responsible for the health of workers in the chemical industry.

578. DiPalma, Joseph R., ed. **Basic Pharmacology in Medicine**. 2nd ed. New York: McGraw-Hill, 1982. 517p. bibliog. index. \$29.95. LC 81-131. ISBN 0-07-017011-8.

The editor of this concise work is also the editor of *Drill's Pharmacology in Medicine* (entry 579). The first edition of the work under review was intended as a companion volume to *Drill's* comprehensive work. However, *Drill's* is somewhat obsolete now and cannot be used as a basis for reference in some areas. Therefore, the second edition of *Basic Pharmacology in Medicine* was expanded to stand by itself. It includes modern approaches to therapy. However, it is still a short work, and students may wish to supplement it with comprehensive texts, of which there are several available. The book is designed around a core curriculum in pharmacology for students in the first year of medical school. Pharmacy schools, however, also use it.

There are 11 parts, as follows: (1) Modern approaches to pharmacology; (2) Anesthetic agents; (3) Central nervous system drugs; (4) Autonomic nervous system; (5) The cardiovascular system; (6) The hematopoietic system; (7) Allergy drugs; (8) Endocrines; (9) Antineoplastic agents; (10) Anti-infective agents; and (11) Metals.

579. DiPalma, Joseph R., ed. **Drill's Pharmacology in Medicine**. 4th ed. New York: McGraw-Hill, 1971. 1920p. bibliog. index. \$47.00. LC 72-161664. ISBN 0-07-017006-1.

Although now somewhat out of date, this comprehensive classic text is still used and valuable. DiPalma has produced a companion volume, *Basic Pharmacology in Medicine* (entry 578), which updates the earlier work, although it is a short, concise work.

The volume under review is a multiauthored work. This first edition, published in 1954, was the first pharmacology text of this kind. The text was intended for use in medical schools, but pharmacy schools, particularly in graduate programs, have used it, especially for reference.

The book is in 20 parts, as follows: (1) Modern approaches to pharmacology; (2) General anesthetics, local anesthetics, and adjuncts to anesthesia; (3) Central nervous system depressants; (4) Drugs affecting behavior; (5) Analeptic and convulsive drugs; (6) The autonomic nervous system; (7) Peripheral nervous system and musculoskeletal system; (8) The cardiovascular system; (9) Water and salt balance; (10) The gastrointestinal tract; (11) Drugs for allergy, cough, vomiting, and dermatomucosal surfaces; (12) The hematopoietic system; (13) The metals; (14) Gases, vapors, and dusts; (15) The vitamins and other nutritional factors; (16) The endocrine glands and reproductive organs; (17) Drugs influencing growth and development; (18) Specific chemotherapy; (19) Diagnostic agents; and (20) Practical and legal aspects of pharmacology.

580. **Drug Fate and Metabolism: Methods and Techniques**. Edited by Edward R. Garrett and Jean L. Hirtz. New York: Marcel Dekker, 1977-1983. 4 volumes. bibliog. index. \$60.00-\$75.00 per volume. LC 76-28081. ISBN 0-8247-1849-6 (Volume 4).

Methodology is important when investigating the fate of drugs in humans or animals. The volumes of this series, which have appeared at irregular intervals, "review all the techniques, physical, chemical, biological, medical, and mathematical, which can be applied to the study of drug fate in the organism." A wide variety of topics by various contributors are presented on the research level.

A long chapter of 150 pages on "Computer Use in Pharmacokinetics" introduces Volume 4. Appended to it are descriptions of about 20 fitting and simulation programs.

581. Feldman, Robert S., and Linda F. Quenzer. **Fundamentals of Neuropsychopharmacology**. Sunderland, MA: Sinauer Associates, 1984. 508p. illus. bibliog. index. \$35.00. LC 83-14937. ISBN 0-87893-178-3.

The central theme of this book is the mechanisms of action of drugs that modify neural function and how these processes cause changes in mood and behavior. The chemical properties of drugs, their biochemical action, their effects on nerve cells, and the resulting changes in behavior are considered. Material is presented at a level for college upperclassmen and beginning graduate students with some background in the physical, biologic, and behavioral sciences. The book is intended primarily for students in behavioral pharmacology, but it also should appeal to students in the neurosciences, pharmacology, and the medical disciplines. Some chapters will interest physicians, psychiatric nurses, and clinical psychologists who frequently encounter users of psychotropic drugs, both licit and illicit.

Chapter headings are: (1) Principles of pharmacology; (2) Principles of behavioral pharmacology; (3) The cytology of nerve cells; (4) Neurophysiological mechanisms; (5) Synaptic structure and function; (6) Acetylcholine; (7) Catecholamines; (8) Serotonin; (9) Amino acid transmitters; (10) Peptides as neurotransmitters; (11) Anxiolytic drugs; (12) Pharmacological treatment of schizophrenia and the affective disorders; and (13) The opiates. There is a section of abbreviations and a glossary.

582. Gerald, Michael C. **Pharmacology: An Introduction to Drugs**. 2nd ed. Englewood Cliffs, NJ: Prentice-Hall, 1981. 686p. bibliog. index. \$20.95. LC 81-1540. ISBN 0-13-662098-1.

Of most value to someone with little knowledge of drugs, this work is a well-written introduction to pharmacology. Its content is weighted toward subjects that have received a good deal of notice in the popular press of recent years such as drugs of abuse, alcoholism, psychotomimetic agents, tobacco smoking, sex hormones, and control of fertility. For this reason, it lacks balance to some extent, although it is quite interesting, with historical background and philosophy provided throughout.

There are 32 chapters grouped into eight sections, as follows: (1) General concepts of pharmacology; (2) Drugs affecting the peripheral nervous system; (3) Drugs affecting the central nervous system; (4) Drugs affecting the cardiovascular system and kidneys; (5) Drugs affecting the endocrine system; (6) Drugs affecting the gastrointestinal and respiratory systems; (7) Chemotherapeutic agents; and (8) Toxicology.

583. Girdwood, Ronald H., ed. **Clinical Pharmacology**. 25th ed. London, England: Baillière Tindall, 1984. 647p. bibliog. index. \$29.95pa. ISBN 0-7020-0974-1.

The first edition of this text was published 100 years ago. It is a multiauthored British work that is said to consider the problems of overseas readers. Some editions were edited by Dilling.

The arrangement of the text is for the most part by organ system, such as the cardiovascular system, the alimentary system, and so forth, but some of the chapters cover classes of drugs, for instance, antimicrobials, analgesics, and vitamins. There are, in addition, chapters on the chemotherapy of malignant diseases and on adverse drug reactions. There are two appendices: "General Aspects of Drug Action" and "A Short List of Drugs." The latter is a list of 200 preferred drugs for a large teaching hospital. The chapter on adverse reactions contains many page numbers referring to sections in previous chapters.

The topics discussed are concise general reviews, too brief to please some reviewers in the United States.

584. Gold, Mark S., R. Bruce Lydiard, and John S. Carman, eds. **Advances in Psychopharmacology: Predicting and Improving Treatment Response**. Boca Raton, FL: CRC Press, 1984. 327p. bibliog. index. \$90.00. LC 83-7695. ISBN 0-8493-5680-6.

A practical guide, this book focuses on the prediction and optimization of pharmacologic treatment of psychiatric patients. The presentation is in three parts. The first part, on diagnosis and treatment response, covers the state of the art, psychiatric misdiagnosis, and thyroid failure and clinical misdiagnosis. The second part, on psychiatric medication and treatment response, summarizes current literature on predicting responses to antidepressants, lithium, MAO inhibitors, antipsychotics, and anxiolytics. The third part, on special clinical problems, discusses alcoholism, narcotic addiction, and the role of the laboratory in psychiatry.

The book is intended to be a useful manual for physicians who are trying to reduce the risk and maximize the benefits when prescribing psychotropic drugs.

585. Goldberg, Morton E., ed. **Pharmacological and Biochemical Properties of Drug Substances**. Washington, DC: American Pharmaceutical Association, Academy of Pharmaceutical Sciences, 1977-. illus. bibliog. index. About \$30.00-\$40.00 per volume. LC 77-88184. ISBN 0-917330-374 (Volume 3).

This series brings together in convenient monograph format scattered information on the pharmacologic and biochemical aspects of some relatively new drug entities in various therapeutic classes. The editor considers the series a companion to *Analytical Profiles of Drug Substances*, edited by Klaus Florey (entry 60).

Each volume presents about 20 drug monographs arranged by therapeutic class. Each monograph discusses the therapeutic agent, including its development, chemistry, animal and clinical pharmacology, biochemistry, and therapeutic activity. Literature references are provided for each drug discussed.

586. Goldstein, Avram, Lewis Aronow, and Sumner M. Kalman. **Principles of Drug Action: The Basis of Pharmacology**. 2nd ed. New York: John Wiley & Sons, 1974. 854p. bibliog. index. (A Wiley Biomedical-Health Publication). \$50.00. LC 73-15871. ISBN 0-471-31260-6.

The authors of this well-accepted textbook have attempted to provide a coherent, rational, and scientifically correct account of the principles underlying every aspect of pharmacology. The intended audience is physicians, medical students, and others who may be interested. The book is designed to serve as a basic text, supplemented by the systematic textbooks. The authors hoped when writing the first edition in 1968 that the basic principles of pharmacology would change so little and so slowly that new editions would be required only rarely. This has not been true, but the updated and revised second edition is still used, although it is now about ten years old.

The material is presented in these general parts: (1) Molecular mechanisms of drug action; (2) The absorption, distribution, and elimination of drugs; (3) Drug metabolism; (4) The time course of drug action; (5) Drug toxicity; (6) Pharmacogenetic and drug idiosyncrasy; (7) Drug allergy; (8) Drug resistance; (9) Drug tolerance and physical dependence; (10) Chemical mutagenesis; (11) Chemical carcinogenesis; (12) Chemical teratogenesis; (13) Drug development; and (14) Drug evaluation in man.

587. **Goodman and Gilman's The Pharmacological Basis of Therapeutics**. 6th ed. Edited by Alfred Goodman Gilman, Louis S. Goodman, and Alfred Gilman. New York: Macmillan Publishing, 1980. 1843p. bibliog. index. \$52.00. LC 80-19261. ISBN 0-02-344720-6.

The first edition of Goodman and Gilman's classic text was published in 1941. The latest edition is still a classic, world renowned, and one of the important books in medicine. It is widely used in the pharmaceutical field, especially by the advanced student. It is a multiauthored work with 55 noted contributors. The primary objectives are: (1) to correlate pharmacology with related medical sciences; (2) to reinterpret the actions and uses of drugs from the viewpoint of important advances in medicine; and (3) to emphasize the applications of pharmacodynamics to therapeutics.

The section titles are: (1) General principles; (2) Drugs acting at synaptic and neuroeffector junctional sites; (3) Drugs acting on the central nervous system; (4) Autacoids; (5) Drug therapy of inflammation; (6) Cardiovascular drugs; (7) Water, salts, and ions; (8) Drugs affecting renal function and electrolyte metabolism; (9) Drugs affecting uterine motility; (10) Locally acting drugs; (11) Chemotherapy of parasitic diseases; (12) Chemotherapy of microbial diseases; (13) Chemotherapy of neoplastic diseases; (14) Drugs acting on the blood and the blood-forming organs; (15) Hormones and hormone antagonists; (16) The vitamins; and (17) Toxicology. Appendices provide information on principles of prescription order writing and patient compliance instruction, design and optimization of dosage regimens, pharmacokinetic data, and drug interactions.

This text is valuable to students of medicine, dentistry, pharmacy, veterinary medicine, pharmacology, anesthesiology, toxicology, and various medical specialties and also to practitioners and researchers.

A new edition of this book is scheduled for publication in late 1985.

588. Gorrod, J. W., ed. **Drug Toxicity**. London, England: Taylor and Francis Ltd., 1979. 326p. illus. bibliog. index. \$32.50. ISBN 0-85066-079-X.

The material in this volume was originally presented at the Pharmaceutical Society's Easter School in April 1978. The book is a sister volume to an earlier work, *Drug Metabolism in Man*, and most of the basic data in that book have been omitted from this one. The aim of the work under review is to present material that will enable the practicing pharmacist and others to assess the likelihood of an adverse reaction having occurred, to understand the mechanism for its initiation, and to propose ways to prevent toxic reactions. The editor hopes the book will help newcomers to the field of toxicology, saying that it provides a broad-based text but that it points in the direction toxicology is now moving.

These chapters are included: (1) Toxic products formed during metabolism of drugs and foreign compounds; (2) Developmental aspects of the metabolism and toxicity of drugs; (3) Genetic factors affecting side effects of drugs; (4) The effect of diet on the toxicity of drugs; (5) Side effects caused by differences in formulation of drugs; (6) Free radical aspects of hepatotoxicity; (7) Toxicological consequences of enzyme induction and inhibition; (8) Neurological toxicity of drugs; (9) The induction of cancer by drug therapy; (10) Teratogenesis produced by drugs and related compounds; (11) Unwanted dermatological responses during drug therapy; (12) The effects of drugs and their metabolites on blood and blood-forming organs; (13) Mechanisms of ocular toxicity; (14) Toxic effects of compounds on the pulmonary system; (15) Prospects for the therapeutic control of fibrosis; and (16) Side effects associated with the use of radiopharmaceuticals.

589. Gossel, Thomas A., and J. Douglas Bricker. **Principles of Clinical Toxicology**. New York: Raven Press, 1984. 357p. bibliog. index. \$39.50. LC 84-13238. ISBN 0-89004-951-3.

Intended as a textbook for undergraduate and graduate students, the purpose of this work is to teach the fundamental principles of clinical toxicology. The authors believe that an understanding of these fundamentals and the reasons certain treatments are used (or not used) will be helpful in dealing with toxic emergencies.

The first part of the book presents general information and principles. The next part deals with environmental, household, and occupational toxicants. The last section takes up drug-induced poisoning. The most common drugs and chemicals are covered.

The chapters begin with an outline of the material to be covered and end with study questions. Clinical case presentations are included for reinforcement. All but the first few chapters are organized by chemical or pharmacologic classification. The toxic agents are discussed, their sources and means of intoxication indicated, and frequency of poisoning, mechanism of toxic action, clinical signs and symptoms, and details of management given. In addition, laboratory findings are included to illustrate principles or to correlate toxic manifestations with blood levels of the toxic substance.

590. Goth, Andres. **Medical Pharmacology: Principles and Concepts**. 11th ed. Consulting editor: Elliot S. Vesell. St. Louis, MO: C. V. Mosby, 1984. 815p. illus. bibliog. index. \$28.95pa. LC 83-17398. ISBN 0-8016-1962-9.

This edition of this classic work is said to be virtually a new book because it has been extensively rewritten and brought up to date. There are 13 contributors. The text has been popular because it is written in a readable manner. It has been used by medical, pharmacy, dental, veterinary, and nursing students.

There are 64 chapters divided among these sections: (1) General aspects of pharmacology; (2) Drug effects on the nervous system and neuroeffectors; (3) Psychopharmacology; (4) Depressants and stimulants of the central nervous system; (5) Anesthetics; (6) Drugs used in cardiovascular disease; (7) Drug effects on the respiratory and gastrointestinal tracts; (8) Drugs that influence metabolic and endocrine functions; (9) Chemotherapy; (10) Principles of immunopharmacology; (11) Poisons and antidotes; (12) Drug interactions; and (13) Prescription writing and drug compendia. Appendices include information on drug blood concentrations, comparison of selected effects of commonly abused drugs, and half-lives of drugs in normal subjects.

591. Grahame-Smith, D. G., and J. K. Aronson. **The Oxford Textbook of Clinical Pharmacology and Drug Therapy**. New York: Oxford University Press, 1984. 843p. bibliog. index. (Oxford Medical Publications). \$42.50; \$26.95pa. LC 83-27517. ISBN 0-19-261492-4; 0-19-261172-0pa.

This is an undergraduate textbook for medical, pharmacy, and pharmacology students covering both principles of clinical pharmacology and information on their application to the treatment and management of disease.

The presentation is in four parts: (1) Clinical pharmacology: including a review of principles, routes of administration of drugs, pharmacokinetics, pharmacodynamics, drug reactions and interactions, drug development, and clinical trials; (2) Practical prescribing: including short monographs on principles of prescribing, the prescription, and sources of drug information; (3) The drug therapy of disease: covering all the common medical conditions; and (4) Pharmacopoeia: providing concise information on most of the drugs mentioned in the text and including mode of action, indications, doses, and the like.

592. Grant, W. Morton. **Toxicology of the Eye: Drugs, Chemicals, Plants, Venoms.** 2nd ed. Springfield, IL: Charles C. Thomas, 1974. 1201p. bibliog. index. \$74.50. LC 76-169880. ISBN 0-398-02299-2.

The author of this impressive volume says that in the ten years between preparation of the first edition and this one, nearly as many new reports were published concerning drugs, chemicals, venoms, and plants involving the eyes as were found in all the literature of the previous 100 years. The purpose of this second edition is to bring all this information together for the people who may need it. The book provides synopses of substances that have properties injurious to the eyes, disturbing to the vision, or otherwise affecting the eyes adversely.

The first section of the book is a relatively short survey of toxic effects involving the eyes. The second and main part presents monographs on drugs, chemicals, plants, and venoms that provide information about their effects on the eyes. Included are literature references plus occasional original observations. The monographs range in length from a paragraph to more than a page. Also included are sections on chemical burns of the eyes, testing methods, and species specificity. The index contains many cross-references to synonymous names. There are many literature references in the text, and a bibliography of frequently cited sources appears at the end of the volume.

593. Gregoriadis, Gregory, Judith Senior, and Andre Trouet, eds. **Targeting of Drugs.** New York: Plenum Publishing, 1982. 430p. bibliog. index. (NATO ASI Series A, Life Sciences, Volume 47). \$55.00. ISBN 0-306-41001-X.

This is a compilation of meeting papers presented at a conference sponsored by NATO in 1981. Its aim is to present an overview of the current status of drug carriers in cancer chemotherapy, antimicrobial and antiviral therapy, vaccines, and genetic engineering. The contributors are leading experts in the research area of targeting of drugs.

The book is in three parts: (1) Macromolecular carriers; (2) Particulate and cellular carriers; and (3) Liposomal carriers. The last section is the longest and is considerably more comprehensive than the others.

The work is not suitable for use as a textbook, but it can be used as a resource work in advanced courses in pharmacology and pharmaceuticals.

594. Haddad, Lester M., and James F. Winchester. **Clinical Management of Poisoning and Drug Overdose.** Philadelphia, PA: W. B. Saunders, 1983. 1012p. illus. (part col.). bibliog. index. \$75.00. LC 82-47652. ISBN 0-7216-4447-3.

A valuable addition to the literature of toxicology, this multiauthored work covers the field very comprehensively. The explosive growth in knowledge and interest in this subject led the authors to develop the text. They developed a readable as well as informative book.

The material is organized into two parts. The first part presents a general approach to the toxicologic patient. The second part addresses the management of poisoning by specific agents. There is a foreword on the history of the poison control movement. Part 2, which makes up about 80 percent of the book, is subdivided into these sections: (1) Natural and environmental toxins; (2) Centrally active agents; (3) Analgesics; (4) Antimicrobials/anticancer agents; (5) Metals and inorganic agents; (6) Pesticides; (7) Inhalation poisoning and solvents; (8) Cardiovascular and hematologic agents; and (9) Miscellaneous agents. Appended is a section on chemical conversions of toxicologic laboratory values.

The work has been very well received.

595. Havener, William H. **Ocular Pharmacology**. 5th ed. St. Louis, MO: C. V. Mosby, 1983. 691p. illus. bibliog. index. \$61.95. LC 83-1042. ISBN 0-8016-2110-0.

This work was designed to provide a readily accessible reference text that will be useful in circumstances of continuous clinical learning and patient care. The author recognizes that our understanding of drug action is constantly changing. The book is quite comprehensive, and it contains a large number of literature references (2573 in all).

For the most part, the material is arranged by drug classification, with the following headings: (1) Evaluation of therapeutic response; (2) Pharmacokinetics: routes of administration; (3) Adhesives; (4) Alpha-chymotrypsin; (5) Anesthesia; (6) Antibiotics; (7) Anticoagulant drugs; (8) Anthelmintic therapy; (9) Antiinflammatory agents (nonsteroidal); (10) Antimitotic agents; (11) Antiviral drugs; (12) Autonomic drugs; (13) Biologic drugs; (14) Chelating agents; (15) Corticosteroid therapy; (16) Ethanol; (17) Fluorescein and other dyes; (18) Germicides; (19) Osmotic agents; (20) Oxygen; (21) Radioactive phosphorus; (22) Radiopaque contrast media; (23) Secretory inhibitors; (24) Trichloroacetic acid; (25) Vasodilators (stagnators); (26) Vitamins; (27) Wetting agents; (28) Label with name of drug; and (29) Glaucoma.

The drugs are discussed under such headings as pharmacology, experimental use, clinical use, toxic effects, and summary.

596. Hayes, A. Wallace, ed. **Principles and Methods of Toxicology**. Student edition. New York: Raven Press, 1984. 750p. illus. bibliog. index. \$39.00. ISBN 0-88167-002-2.

The "student edition" of this work seems to differ from the first edition of 1982 only in price and binding. It has been designed primarily as a textbook for introductory graduate courses in toxicology and also serves as a review for practicing toxicologists by providing a thorough and systematic introduction to the field. It describes current testing procedures, offers guidelines on data interpretation, and highlights areas of controversy.

The first chapters of the book cover basic toxicologic testing methods and procedures now required to meet regulatory standards. The last chapters deal with specific organ systems and contain material on kinetics, metabolism, and effects on cellular organelles and target organs.

Chapter headings are: (1) Principles and methods for acute and subchronic toxicity; (2) Practical considerations in conduct of chronic toxicity studies; (3) Methods in testing for carcinogenicity; (4) Reproductive toxicology; (5) Teratology test methods for laboratory animals; (6) Inhalation toxicology; (7) Skin and eye testing in animals; (8) Genetic toxicology; (9) Statistics for toxicologists; (10) Animal care and maintenance; (11) Methods in behavioral toxicology; (12) Biochemical methods for neurotoxicological analyses of neuroregulators and cyclic nucleotides; (13) Detection and evaluation of chemically induced liver injury; (14) Renal methods in toxicology; (15) Methods in gastrointestinal toxicology; (16) Endocrine toxicology; (17) Application of isolated organ techniques in toxicology; (18) Evaluation of immune functions in toxicology; (19) Techniques in membrane toxicology; (20) Microsomal enzymes involved in toxicology—analysis and separation; (21) Organelles as tools in toxicology; (22) Pharmacokinetics in toxicology; and (23) Extrapolation to man.

The book is well written, easy to read, and authoritative.

597. Hollister, Leo E. **Clinical Pharmacology of Psychotherapeutic Drugs**. 2nd ed. New York: Churchill Livingstone, 1983. 214p. illus. bibliog. index. (Monographs in Clinical Pharmacology). \$29.00. LC 82-23630. ISBN 0-443-0827-3.

The aim of this valuable textbook is to provide systematic descriptions of

Written by a leading expert in the field, this concise but detailed book has been well received. It is recommended for pharmacologists and psychiatrists and others who investigate or prescribe psychotropic drugs.

There are six chapters, as follows: (1) Psychotherapeutic drugs in the treatment of emotional disorders; (2) Antianxiety drugs; (3) Hypnotics; (4) Antidepressants; (5) Antipsychotic drugs; and (6) Lithium and manic-depressive disorders. Each chapter deals with the chemistry, pharmacokinetics, pharmacodynamics, clinical uses, and unwanted effects of the drugs considered. Appended is a glossary of drugs and trade names.

598. Jenner, Peter, and Bernard Testa, eds. **Concepts in Drug Metabolism**. Parts A-B. New York: Marcel Dekker, 1980-81. 2 volumes. illus. bibliog. index. (Drugs and the Pharmaceutical Sciences, Volume 10). \$49.50; \$65.00. LC 80-12792. ISBN 0-8247-6906-6; 0-8247-1232-0.

The contributors to these two volumes were invited to contemplate an area of drug metabolism research and present to the reader a wide-ranging and conceptual approach to major topics in drug metabolism and allied fields. Because the conceptual approach was required, the various chapters reflect the personalities and views of their authors to a considerable extent. Some of the chapters are quite philosophical in approach, and others are more factual in illustrating underlying concepts. The work represents an attempt to organize a large amount of data into common themes.

Part A contains these chapters: (1) Significance of analytical techniques in drug metabolism studies; (2) A structural approach to selectivity in drug metabolism and disposition; (3) Mechanisms of oxidative functionalization reactions; (4) Conjugation reactions; (5) Role of extrahepatic metabolism in drug disposition and toxicity; (6) Developmental implications; and (7) Use of metabolite data in the evaluation of pharmacokinetics and drug actions. Part B includes these contributions: (1) The endoplasmic reticulum; (2) Hepatic cytochrome P-450-linked drug-metabolizing systems; (3) Toxicification and detoxification as a result of xenobiotic metabolism; (4) An overview of the phenomena of enzyme induction and inhibition; (5) Genetic aspects of drug metabolism relating to drug action; (6) Drug metabolism and drug toxicity; (7) In vivo assessment of hepatic drug disposition; (8) Altered drug disposition in disease states; and (9) Xenobiotic metabolism: necessity, chance, mishap, or none of the above? Each chapter begins with a summary paragraph or two and ends with a list of many literature references.

The work provides good coverage of the topic. It can be used by the novice but is probably more valuable to researchers, teachers, or those who are attempting to keep up in the field.

599. Kagan, Benjamin M., ed. **Antimicrobial Therapy**. 3rd ed. Philadelphia, PA: W. B. Saunders, 1980. 542p. bibliog. index. \$42.00. LC 80-50252. ISBN 0-7216-5234-4.

Many experts contributed to this text, bringing up-to-date scientific and clinical information to the reader. Students and practitioners in pharmacology and infectious disease should find the volume valuable. The presentation is in two parts: "Applied Pharmacology" and "Clinical Applications." The first section covers the various classes of antimicrobial agents in 15 chapters. The second section of 32 chapters presents the material under headings indicating diseases, medical problems, or type of infection. Increased emphasis has been given to the preventive aspects of antimicrobial therapy.

This is a high-quality, comprehensive treatment of the subject.

600. Katzung, Bertram G., ed. **Basic and Clinical Pharmacology**. 2nd ed. Los Altos, CA: Lange Medical Publications, 1984. 888p. illus. bibliog. index. \$27.50. LC 84-80772. ISBN 0-87041-261-2.

This work is the second edition of a successor to the familiar *Review of Medical Pharmacology* edited through a number of editions by F. H. Meyers, E. Jawetz, and A. Goldfein. The new work follows the condensed kind of coverage of the older series with emphasis on the clinical rather than basic aspects of the therapeutic use of drugs. The contributors are well-known researchers and scientists.

The book is composed of 68 chapters and several appendices. Most of the chapters cover major drug groups, but there are some special topics such as prescription writing, management of the poisoned patient, therapeutic and toxic potential of over-the-counter drugs, and some aspects of veterinary pharmacology. The appendices cover drug interactions, drug effects on laboratory tests, and identification of trade and generic name drugs.

The book is suitable for use as a textbook and as a reference book giving quick overviews of a particular drug type.

601. Kucers, A., and N. McK. Bennett. **The Use of Antibiotics: A Comprehensive Review with Clinical Emphasis**. 3rd ed. London, England: William Heinemann Medical Books, 1979. 1014p. bibliog. index. \$63.50. ISBN 0-433-18877-4.

The aim of this valuable textbook is to provide systematic descriptions of antibiotics in current use in antibacterial chemotherapy. The text does not deal primarily with the treatment of diseases, although this information is available through the index. Although intended primarily for clinicians, the book is also of use to pharmacists, pharmacologists, microbiologists, and students of these subjects. There has been rapid growth in the number of antimicrobial agents available, but this book covers most of them. Because considerable changes have occurred in the sensitivities of various organisms to chemotherapeutic agents, the authors have indicated where possible the best alternative drugs for the treatment of infections due to drug-resistant strains. They also have indicated synergistic drug combinations, which may prove valuable.

The presentation is in five parts, as follows: (1) Antibiotics; (2) Synthetic antibacterial and antiparasitic drugs; (3) Drugs mainly for tuberculosis; (4) Antifungal drugs; and (5) Antiviral drugs. The accompanying lists of literature references are quite long.

The monographs presented are each a number of pages in length and usually include the following information: description, sensitive organisms, in vitro sensitivities, mode of administration and dosage, availability, serum levels in relation to dosage, excretion, distribution of the drug in the body, mode of action, toxicity, and clinical uses.

602. Lambie, John W., ed. **Toward Understanding Receptors**. Foreword by G. Alan Robison. Amsterdam, The Netherlands: Elsevier/North-Holland Biomedical Press, 1981. 233p. illus. bibliog. index. (Current Reviews in Biomedicine 1). \$25.00pa. ISBN 0-444-80339-4.

Progress toward understanding receptors was initially slow but has increased spectacularly in the past five or ten years. This work provides a readable overview of the topic. It is a collection of 33 review articles from the 1979 and 1980 issues of *Trends in*

Pharmacological Sciences (see entry 948), which deal in one way or another with what receptors are and how they function.

Receptor research is important for all students and practitioners in the biomedical field.

603. Levine, Ruth R. **Pharmacology: Drug Actions and Reactions**. 3rd ed. Boston, MA: Little, Brown, 1983. 526p. illus. bibliog. index. \$19.95pa. LC 83-80068. ISBN 0-316-52222-8.

Levine's book is a concise introductory text that provides an overview of pharmacology with an emphasis on fundamental concepts and principles. It is easy to read and provides a good background to the subject. It is suitable for undergraduate and graduate students, but it is likely that it will serve the latter best as a companion to more advanced textbooks of pharmacology. The intended audience includes students in the health professions, including medicine, nursing, and veterinary medicine. It also may be useful to biologists, chemists, psychologists, public health officials, lawyers, legislators, administrators, science teachers, and intelligent laypersons.

Chapter headings are: (1) The heritage of pharmacology; (2) The scope of pharmacology—definitions; (3) How drugs act on the living organism; (4) How drugs reach their site of action, I. General principles of passage of drugs across biologic barriers; (5) How drugs reach their site of action, II. Absorption; (6) How drugs reach their site of action, III. Distribution; (7) How the actions of drugs are terminated, I. Excretion; (8) How the actions of drugs are terminated, II. Biotransformation; (9) General principles of the quantitative aspects of drug action, I. Dose-response relationships; (10) General principles of the quantitative aspects of drug action, II. Time-response relationships; (11) Factors modifying the effects of drugs in individuals, I. Variability in response attributable to the biologic system; (12) Factors modifying the effects of drugs in individuals, II. Variability in response attributable to the conditions of administration; (13) Drug toxicity; (14) The pharmacologic aspects of drug abuse and drug dependence; (15) How drugs alter physiologic function: a recapitulation; and (16) The development and evaluation of new drugs. There are several appendices and a glossary. Each chapter concludes with study and review questions and suggested readings where the user can find more detailed information about the drugs discussed, as well as those that are not discussed.

The book has been received with some reservations, mainly because it is condensed and simplified; however, this seems to have been the author's intent.

604. Lipton, Morris A., Alberto DiMascio, and Keith F. Killam, eds. **Psychopharmacology: A Generation of Progress**. New York: Raven Press, 1978. 1731p. illus. bibliog. index. \$74.50. LC 77-83697. ISBN 0-89004-191-1.

Developed by the American College of Neuropsychopharmacology to provide a comprehensive survey of progress in the field, this large volume summarizes current understanding of the uses and modes of action of psychotropic drugs. It spans the entire field of neuropsychopharmacology from its biochemical bases to clinical usage of the drugs. Students, clinicians, researchers, teachers, and all who are interested in the study or use of psychotropic drugs will find the book of value.

The following sections, each including several chapters, are presented: (1) Ethical and methodological issues; (2) Neuroanatomical, histochemical, and neurophysiological mechanisms of drug action; (3) Biochemical pharmacology: neurotransmitters; (4) Biochemical pharmacology: receptors; (5) Peptides, brain, and

behavior; (6) Neuroendocrinology; (7) Behavioral pharmacology: animal models; (8) Pharmacology of memory and learning; (9) Electrophysiological indicators of drug action in animals and man; (10) Pharmacology of neurological disorders; (11) Human models and behavioral pharmacology; (12) Psychotropic drug assessment; (13) Methodology of clinical research; (14) Clinical pharmacology: metabolism and kinetics; (15) Clinical pharmacology: mechanisms; (16) Toxicology and side effects; (17) Drugs and schizophrenia: mechanism, metabolism, and pharmacodynamics; (18) Drugs and schizophrenia: therapeutic approaches; (19) Affective disorders: etiology and pharmacodynamics; (20) Drugs and affective disorders: therapeutic approaches; (21) Drugs, anxiety, and related states: mechanisms, metabolism, and pharmacodynamics; (22) Drugs, anxiety, and related states: therapeutic approaches; (23) Pediatric psychopharmacology; (24) Geriatric psychopharmacology; and (25) Drug abuse. All chapters include many literature references.

605. Loomis, Ted A. **Essentials of Toxicology**. 3rd ed. Philadelphia, PA: Lea & Febiger, 1978. 245p. illus. bibliog. index. \$12.50. LC 78-9005. ISBN 0-8121-0647-4.

Certain principles of toxicology are applicable to large numbers of chemicals, and an understanding of these principles is necessary to gain insight into the subject. In this short introductory text, the material is presented as a basic scientific discipline rather than as a compilation of harmful effects of substances. Described are mechanisms and other factors involved when toxic substances act on cells, systems, or whole animals. Examples are included.

Chapter headings are: (1) Introduction and scope; (2) Numbers in toxicology; (3) Biologic factors that influence toxicity; (4) Chemical factors that influence toxicity; (5) Influence of route of administration on toxicity; (6) Genetic factors that influence toxicity; (7) Classification of harmful effects of chemicals; (8) Normal toxic effects of chemicals; (9) Abnormal response to chemicals; (10) The basis of selective toxicity; (11) The basis of antidotal therapy; (12) Principles of biologic tests for toxicity; and (13) Toxicologic testing methods.

606. Lowry, W. T., and James G. Garriott. **Forensic Toxicology: Controlled Substances and Dangerous Drugs**. New York: Plenum Publishing, 1979. 445p. bibliog. index. \$55.00. LC 78-26439. ISBN 0-306-40124-X.

With the spread of drug abuse, there is a need for information to assist with legal matters surrounding the problem. The federal and state laws are complex, and there is a demand for expert chemists and toxicologists in the courtroom. In addition, attorneys need toxicologic information to handle drug cases.

The book is intended primarily for the active forensic chemist or the student. The material included should provide the scientific expert with the necessary information to testify in court; the attorney should find enough to assist in prosecuting or defending a case; and the physician should find information that will assist in maintaining proper records and prescription practices.

Practical material is presented. The first section discusses new drugs, advertising, adulterated drugs, misbranded drugs, and drug nomenclature. The second section describes the various pharmaceutical dosage forms (17 in all) such as capsules, creams, elixirs, aerosols, powders, tablets, and so on. The third section explains the classification of scheduled substances. There are five schedules, ranging from schedule I, which contains drugs with the highest potential for abuse, to schedule V, which includes drugs with the lowest potential for abuse. Section 4 is on regulation of

controlled substances. The next sections, on excluded substances, excepted substances, and drug isomers and derivatives, are mainly lists. Section 8 is a brief outline of techniques and instrumentation for the analysis of drugs.

Section 9, the last section, makes up two thirds of the book. It is an alphabetical (by generic name) listing of "Controlled and Noncontrolled but Commonly Abused Substances." There is a short monograph on each drug. Information provided about each drug usually includes synonymous names, trade names, products that contain the drug, a diagram of the chemical structure, general comments, toxicology-pharmacology, and biochemistry.

The general intent of the book is to bridge the gap between scientific legal matters in the field of controlled and dangerous drugs. The title of the work is somewhat misleading; it does not contain material usually considered to be in the area of forensic toxicology in the classic sense.

607. Maxwell, George M. **Principles of Paediatric Pharmacology**. New York: Oxford University Press, 1984. 407p. illus. bibliog. index. \$37.50. LC 84-787. ISBN 0-19-520447-6.

Pediatric pharmacology is a new discipline, and books that review the clinical information that has accumulated are important. This is the first book on the topic by a single author.

The first chapters of the book develop ideas and principles. Other chapters focus on organ systems, usually in a general way rather than focusing on the special problems of children. A large number of drugs are covered briefly. The last chapter covers ethics and problems of conducting clinical trials in children.

608. Melmon, Kenneth L., and Howard F. Morrelli, eds. **Clinical Pharmacology: Basic Principles in Therapeutics**. 2nd ed. New York: Macmillan Publishing, 1978. 1146p. bibliog. index. \$39.95; \$29.95pa. LC 77-5690. ISBN 0-02-380230-8; 0-02-380270-7pa.

Designed to illustrate a consistency of approach to qualitative and quantitative decision making in therapeutics, this book should help the therapist distinguish drug-related events from spontaneous disease alterations and provide general knowledge that will allow him to individualize therapy. The intended audience is students in medical, osteopathy, pharmacy, and allied health schools. The editors say that successful use of the book requires knowledge of both pharmacology and medicine and that it is intended to supplement, not replace, basic textbooks in these fields.

The material presented is divided into three units: (1) Basic principles of drug administration; (2) Pathophysiologic and pharmacologic considerations in drug administration; and (3) Recognition and evaluation of effects of drug administration. Chapter headings are: (1) Drug choice in disease states; (2) Drug administration and regimens; (3) Clinical pharmacokinetics; (4) Psychologic factors in drug administration; (5) Pharmacodynamics and drug disposition in pregnant women, in neonates, and in children; (6) Cardiovascular disorders; (7) Renal disorders; (8) Hepatic disorders; (9) Gastrointestinal disorders; (10) Respiratory disorders; (11) Endocrine disorders; (12) Hematopoietic disorders; (13) Inflammatory disorders; (14) Infectious disease; (15) Disorders of cell growth; (16) Psychiatric disorders; (17) Neurologic disorders; (18) Role of genetic factors in the rational use of drugs; (19) Dermatologic disorders; (20) Drug reactions; (21) Drug interactions; (22) Alcohol and drug abuse; (23) Rational therapy of

poisoning; (24) Rational use of placebo; (25) Qualitative aspects of therapeutic decision making; and (26) Economics and epidemiology of drug use.

609. Mitchell, Jerry R., and Marjorie G. Horning, eds. **Drug Metabolism and Drug Toxicity**. Sponsored by the American Society of Pharmacology and Experimental Therapeutics. New York: Raven Press, 1984. 436p. illus. bibliog. index. \$78.00. LC 83-24540. ISBN 0-89004-997-1.

This comprehensive volume outlines principles and methods for studying metabolic transformations due to drug toxicity. Thirty-four distinguished investigators have contributed to the 18 chapters presented. The intent of the book is to "document the role of drug metabolism in various toxic responses (mutagenicity, carcinogenicity, cytotoxicity, cell death) that may follow drug administration or chemical exposure." It was felt that a need existed for such a book, one that included modern methods for studying the subject.

The material is divided among six sections: (1) Metabolic pathways; (2) Drug metabolism and drug toxicity; (3) Drug metabolism and genetic toxicology; (4) Drug metabolism and drug toxicity: integration; (5) Drug metabolism and drug toxicity: pathophysiology; and (6) Methodology.

The book is highly regarded. It is of value to both students and researchers in the field and is essential for toxicologists, pharmacologists,, and researchers concerned with drug safety testing.

610. Polson, C. J., M. A. Green, and M. R. Lee. **Clinical Toxicology**. 3rd ed. Philadelphia, PA: J. B. Lippincott, 1983. 607p. bibliog. index. \$47.50. LC 82-83965. ISBN 0-397-58286-2.

The authors of this work have tried to achieve a balance between older literature on poisoning and the more modern information on analysis and biochemical mechanisms. The primary intended audience is the physician and the forensic pathologist, but the pharmacist also will find it useful. A wide variety of industrial, chemical, and natural poisons are discussed. The book is interesting to read, especially because it contains many clinical and forensic case histories.

The 32 chapters cover each poison in depth, with information on its importance, sources, circumstances under which the poisoning may occur, lethal dose, clinical manifestation, diagnosis, treatment, prognosis, and postmortem findings.

611. **Registry of Toxic Effects of Chemical Substances (RTECS)**. Cincinnati, OH: U.S. Department of Health and Human Services, Public Health Service, Center for Disease Control, National Institute for Occupational Safety and Health. 1971- . (DHEW Publication No. (NIOSH); DHHS (NIOSH) Publication). Annual. ISSN 0361-2546. (For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, DC.).

The former title of this series was *Toxic Substances*. The compilation has grown considerably from one edition to the next; the current one is in three large volumes. RTECS is a compendium of toxicity data extracted from the scientific literature. All data listed are referenced to the sources in which the data appeared. The current edition contains about 219,000 listings; more than 59,000 are different chemicals; the others are synonyms. All substance prime names are listed in alphabetical order, and each synonym is cross-referenced to its prime name accession number. Also provided is a

Chemical Abstracts Service number correlating these with the RTECS accession number. A list of all RTECS bibliographic references alphabetized by CODEN appear at the end of each volume.

A good deal of data is given about each substance in quite abbreviated fashion (a feature that discourages some users). Usually included are names, date when data record was last changed, CAS number, molecular weight, molecular formula, irritation data and references, mutation data and references, reproductive effect data and references, tumorigenic data and references, toxicity data and references, aquatic toxicity rating, government agency standards and regulations, analytic methods, and more.

The publication is intended mainly for the use of physicians, industrial hygienists, toxicologists, and researchers who are seeking toxicity data. It is very comprehensive and valuable. The information in this compendium is also available via a computerized database (see entry 701).

612. Roberts, Robert J. **Drug Therapy in Infants: Pharmacologic Principles and Clinical Experience**. Philadelphia, PA: W. B. Saunders, 1984. 398p. illus. bibliog. index. \$49.00. LC 83-20033. ISBN 0-7216-7604-9.

This text, written by a professor of pediatrics and pharmacology, provides coverage of the administration, actions, and effects of drugs as they relate to the newborn. Drugs of choice are discussed, with their dosages, adverse reactions, and toxicity indicated.

The presentation is in two main sections. The first section presents pharmacologic principles and pharmacokinetics. The second section is a comprehensive review of drugs currently used in the treatment of infants, along with recent developments in the treatment of certain neonatal diseases. Chapter headings are: (1) Pharmacologic principles in therapeutics in infants; (2) Pharmacokinetics: basic principles and clinical applications; (3) Special considerations in drug therapy in infants; (4) Antimicrobial agents; (5) Anticonvulsants; (6) Methylxanthine therapy: caffeine and theophylline; (7) Cardiovascular drugs; (8) Diuretics; (9) Prostaglandins, prostaglandin inhibitors, and vitamin E; (10) Miscellaneous drugs; and (11) Fetal and infant intoxication.

The book is of value to pediatricians, neonatologists, pharmacologists, hospital pharmacists, and those in neonatal intensive care units.

613. Sax, N. Irving. **Cancer Causing Chemicals**. Assisted by Elizabeth K. Weisburger, David Schottenfeld, Joanna Haas, Benjamin Feiner, Barry I. Castleman, and Richard J. Lewis, Sr. New York: Van Nostrand Reinhold, 1981. 466p. illus. bibliog. \$39.95. LC 81-4947. ISBN 0-442-21919-9.

This book attempts to alert the public to the hazards of cancer-causing chemicals and at the same time provide the health professional with a list of about 2400 materials that are confirmed, probable, or suspected carcinogens.

Section 1 presents chapters intended for the general public. They are written in popular style, with some obvious political bias. Chapter titles are: (1) Chemical carcinogenesis and its relevance for the general population; (2) Carcinogens in the workplace; (3) Control of workplace carcinogens; and (4) Regulations affecting use of carcinogens.

Section 2, which is in two parts, presents first a list of synonyms of the carcinogens alphabetically arranged with cross-references provided. The last chapter lists the basic carcinogens and gives information about them. Carcinogenicity of each substance is

rated as conclusive, suggestive, or indeterminate. Other information provided includes IARC (International Agency for Research on Cancer) findings, NIOSH (National Institute for Occupational Safety and Health) number, and CAS (Chemical Abstracts Service) number and sometimes several paragraphs of explanation with bibliographic references.

The material in the book probably would have been more successfully presented as two separate works, the first part a general interest book and the last a reference source for the health professional or scientist.

614. Sax, N. Irving. **Dangerous Properties of Industrial Materials**. 6th ed. Assisted by Benjamin Feiner, Joseph J. Fitzgerald, Thomas J. Haley, and Elizabeth K. Weisburger. New York: Van Nostrand Reinhold, 1984. 3124p. illus. bibliog. \$198.00. LC 83-21766. ISBN 0-442-28304-0.

This sixth edition of a fine classic work is almost three times the size of the fifth edition. It contains about 19,000 entries, up from about 9000. The aim of the book is the same, to promote safety by providing up-to-date hazard information on a wide variety of materials. Substances listed include drugs, food additives, preservatives, ores, pesticides, dyes, detergents, lubricants, soaps, plastics, extracts from plant and animal sources, plants and animals that are toxic by contact or consumption, and industrial intermediates and waste products from production processes. Excluded are trade-name products representing compounded or formulated proprietary mixtures available as commercial products. Commercial product trade names are included, however, when they represent a single active chemical entity or a well-defined mixture of constant composition.

There are five introductory essays, as follows: Toxicology; Industrial Air Contaminant Control; Industrial and Environmental Cancer Risks; Occupational Biohazards; and Nuclear Medicine Applications, Benefits, and Risks. The bulk of the work, however, is the vast listing of "General Chemicals," arranged alphabetically by chemical name. Nearly all entries carry both NIOSH (National Institute for Occupational Safety and Health) and CAS RN (Chemical Abstracts Service Registry Number) numbers because these can be used to interrogate databases worldwide. Synonyms are given in English, French, German, Dutch, Polish, and Italian. Other information provided includes formula, molecular weight, description, toxicity data (including all hazards), and references to entries in the bibliography. Codes are employed to make the information concise. There is a "synonyms" section that serves as an index by providing references to the terms listed in the main section.

Sax is also the editor of a bimonthly periodical publication, *Dangerous Properties of Industrial Materials Report* (entry 776), which publishes material similar to that in the work under review and which can serve as a supplementary publication.

615. Shepard, Thomas H. **Catalog of Teratogenic Agents**. 4th ed. Baltimore, MD: Johns Hopkins University Press, 1983. 529p. bibliog. index. \$35.00. LC 82-49063. ISBN 0-8018-3027-3.

A standard reference work, this is a comprehensive source of information about 1353 known teratogenic agents. The catalog lists pharmaceuticals, chemicals, environmental pollutants, food additives, household products, and viruses alphabetically with cross-references from synonyms. It is intended for teratologists, pharmacologists, geneticists, practicing physicians, scientists studying the environment,

and chemists developing new pharmaceutical products. Pharmacists providing drug information services also find it valuable.

The monographs review data on man, monkeys, rats, mice, rabbits, hamsters, guinea pigs, and chicks; other lower animals are excluded. Each monograph provides the name of the product (usually the name used in *Merck Index*); a brief description of the work done on the subject with species, dose, and gestational age; type of defect produced; and references to the literature. There are subject and author indices.

616. Singer, Thomas P., Tag E. Mansour, and Raul N. Ondarza, eds. **Mechanisms of Drug Action**. Orlando, FL: Academic Press, 1983. 405p. illus. bibliog. index. \$39.00. LC 83-22362. ISBN 0-12-646680-7. (Proceedings of a Symposium on the Biochemical Basis of Drug Action held at Stanford University, Stanford, CA, 20-23 June, 1983.).

This book is directed at scientists from a diversity of disciplines who are interested in the development of therapeutic agents.

Recent advances in enzymology, protein chemistry, molecular biology, and medicine and the discovery of new mediators of physiological functions indicate that it is now possible to approach the problem of designing useful new drugs directly that will have fewer side effects, greater efficacy, and less toxicity.

The meeting on which this volume is based brought together scientists in a number of disciplines to discuss what has been learned about the development of drugs and what can be accomplished.

The volume begins with the keynote address on "The Scientist's Burden." The papers are then presented under these general headings: (1) Receptors; (2) Molecular and genetic analysis of drug action; (3) Antiparasitic agents; (4) Prostaglandins and leukotrienes; (5) Biochemical basis of the action of toxic substances; and (6) CNS-directed agents.

617. Skoutakis, Vasilios A. **Clinical Toxicology of Drugs: Principles and Practice**. Philadelphia, PA: Lea & Febiger, 1982. 293p. bibliog. index. \$25.50. LC 81-20930. ISBN 0-8121-0897-8.

This clinically oriented text provides the physician and clinical toxicologist with information on the rational management of the drug-intoxicated patient. It is also valuable as a textbook and as a reference for Poison Control Centers. Portions of the material presented were initially published in the *Clinical Toxicology Consultant*, a journal edited and published by the author. Skoutakis holds a Pharm. D. degree and has an academic position.

The book is in two parts: (1) The intoxicated patient; and (2) Management of common drug overdoses. Section 1 presents these chapters: (1) Toxic emergencies: principles of treatment; (2) The role of the toxicology laboratory; and (3) Dialysis and hemoperfusion of drugs and toxins. Section 2 groups commonly used and abused drugs into pharmacologic categories, as follows: barbiturates, nonbarbiturates, narcotic analgesics, tricyclic antidepressants, neuroleptics; lithium, anticonvulsants, central nervous system stimulants, cocaine, phencyclidine (PCP), salicylates, digoxin, acetaminophen, iron, and isoniazid (INH).

618. Thienes, Clinton H., and Thomas J. Haley. **Clinical Toxicology**. 5th ed. Philadelphia, PA: Lea & Febiger, 1972. 459p. illus. bibliog. index. \$117.30. LC 73-152032. ISBN 0-8121-0237-1. (Available from Books on Demand, University Microfilms International, Ann Arbor, MI.).

Written primarily as a textbook and as a guide for the general practitioner, this valuable book presents the toxicology of substances grouped according to their major toxic action. The poisons discussed are those that most frequently give rise to serious symptoms or pathologic conditions or death or that typify a group of poisons. The following information is usually given about each substance: toxic dose, source and chemistry, absorption, symptoms and actions, duration, fate and excretion, diagnosis, cause of death, and treatment. Several approved methods of treatment may be included.

Chapter headings are: (1) Convulsant poisons; (2) Central nervous system depressants; (3) Peripherally acting nerve poisons, poisons action on nerve trunks, ganglia and nerve endings; (4) Muscle poisons; (5) Protoplasmic poisons; (6) Poisons of the blood and hematopoietic organs; (7) Principles of treatment; (8) An outline of symptom diagnosis; (9) General discussion of absorption, fate and excretion of toxic materials; and (10) Chemical diagnosis of poisoning. Some of the chapters of the concluding section include tables of identification of poisons and list many compounds not mentioned in the clinical part of the text (Sections 1-5). Special reagents are listed in an appendix with instructions for their preparation.

619. U.S. National Institutes of Health. **Survey of Compounds Which Have Been Tested for Carcinogenic Activity**. Prepared for the National Cancer Institute by Franklin Research Center. Washington, DC: Government Printing Office, 1947-. (Formerly Public Health Service Publication No. 149.).

From 1947 to 1984 about 11 huge volumes of this series were published, prepared by various individuals and issued by various government agencies. An earlier publication of the same title was published in 1941, but the material in it was incorporated into a later volume. The survey has been a massive undertaking; it consists of carcinogenic data extracted from published information and arranged in a uniform tabular format. The material is organized by chemical structure categories. The format of the tables allows for easy access to data and to research findings. Information provided in them includes literature reference, animal, strain or type and sex, preparation and dose, route and site, pathology examination level, animals with tumors (includes details), survival, and duration of the experiment.

Recent volumes have included these indices and some cumulate the indices of earlier volumes of the series: author of each document cited, author cross-reference (for secondary authors), route of administration, site of application, animal/species, tumor site, vehicle, cumulative compound name, cumulative CAS Registry Number, and cumulative molecular formula.

No critical evaluation of the data is presented; the user must evaluate it and draw his own conclusions.

620. Upson, Dan W. **Upson's Handbook of Clinical Veterinary Pharmacology**. Bonner Springs, KS: VM Publishing (144 N. Nettleton, Bonner Springs, KS 66012), 1980. 443p. index. \$17.50pa. ISBN 0-935078-15-0.

Evolved from a pharmacology teaching syllabus for veterinary students, this ready reference book includes drugs most commonly used in animals and human drugs used in veterinary practice. Extralabel uses of drugs are included for information, and some drugs no longer available are included for historical purposes. Emphasis is on the clinical application of the basic concepts of veterinary pharmacology.

Chapter headings of the introductory chapters are: (1) Principles of clinical pharmacology; (2) Central nervous system; and (3) Autonomic nervous system. The

remainder of the book takes up drugs by classes as follows: (4) Analgesic and anti-inflammatory drugs; (5) Gonadotropins and gonadal hormones; (6) Muscle relaxants; (7) Urinary system; (8) Gastrointestinal system; (9) Blood and blood-forming system; (10) Cardiovascular system; (11) Anthelmintics; (12) Insecticides; (13) Histamines and antihistamines; (14) Drugs acting upon the uterus; (15) Local anesthetics; (16) Locally acting external medications; (17) Expectorants and cough medicines; (18) Cancer chemotherapy; and (19) Antimicrobial drugs. The index includes trade names.

621. Yacobi, Avraham, and Herbert Barry, III, eds. **Experimental and Clinical Toxicokinetics**. Washington, DC: American Pharmaceutical Association, Academy of Pharmaceutical Sciences, 1984. 188p. bibliog. \$39.00. LC 84-71408. ISBN 0-917330-51-X.

This book is based on a symposium sponsored by the Academy of Pharmaceutical Sciences, Section on Pharmacodynamics and Drug Disposition of the American Pharmaceutical Association at the 33rd meeting, November 1982, San Diego, California. The term "toxicokinetics" combines the terms for two well-established topics of medical research, toxicology and pharmacokinetics, and can be defined as the "measurement of toxic effects of chronic drug exposure in evaluations of drug safety." Materials on experimental and clinical toxicokinetics are gathered together in this book as necessary and interrelated aspects of drug safety evaluation programs.

The following papers by various contributors are included: (1) Preclinical toxicokinetics; (2) Toxicokinetics—a role in drug discovery and development; (3) The role of drug disposition in the interpretation of toxicologic response; (4) Selective disposition studies in drug safety evaluation; (5) Correlation of drug disposition and toxicity studies; (6) Disposition and toxicity of nitroaromatic compounds; (7) Toxicokinetics: clinical variables and implications; (8) Drug disposition as a tool in establishing human safety; (9) The toxicokinetics of the acute overdose; (10) Aminoglycoside nephrotoxicokinetics in humans; and (11) Kinetics and the clinical therapeutic ratio.

The book is of value to toxicologists or anyone interested in the workings of drug toxicity testing.

622. Yamamura, Henry I., S. J. Enna, and Michael J. Kuhar, eds. **Neurotransmitter Receptor Binding**. 2nd ed. New York: Raven Press, 1985. 242p. illus. bibliog. index. \$49.00. LC 84-17876. ISBN 0-88167-027-8.

A revised laboratory guide, this work is intended to provide the investigator with fundamental principles and procedures on a topic of considerable importance and future potential. The text outlines the principles of neurotransmitter receptor binding assays, the precise methods available for these studies, and the uses of these assays for drug screening, localizing neuroreceptors, studying the molecular biology of receptors, and identifying endogenous substances that interact at the receptor site. Detailed "how-to" instructions are given for performing each assay and analyzing data.

Contents of the book are as follows: (1) Receptor models and the action of neurotransmitters and hormones: some new perspectives; (2) Criteria for receptor identification; (3) Neurotransmitter hormone or drug receptor binding methods; (4) Peptide binding assays; (5) Studies of voltage-sensitive sodium channels using ligand binding methods; (6) Techniques for studying the biochemistry and cell biology of

receptors; (7) Receptor localization with the microscope; (8) Radioreceptor assays; and (9) Receptor binding as a primary drug screen.

The book is suitable and valuable for students and researchers in the neurosciences and pharmacology.

17 Cosmetics, Perfumes, and Flavors

The sciences of cosmetics, perfumes, and flavors are closely related to the pharmaceutical sciences. The federal Food, Drug and Cosmetic Act defines a cosmetic as: (1) articles intended to be rubbed, poured, sprinkled, or sprayed on, introduced into, or otherwise applied to the human body or any part thereof for cleansing, beautifying, promoting attractiveness, or altering the appearance, and (2) articles intended for use as a component of any such articles, except that such terms shall not include soap. To the government, a cosmetic improves appearance, whereas a drug diagnoses, relieves, or cures a disease. It is sometimes difficult, however, to tell a drug from a cosmetic. The rules that regulate the manufacture and sale of cosmetics and drugs are quite different, however. The Food and Drug Administration does not review new cosmetics before they are put on the market.

Although the science of cosmetics is very old, going back into antiquity, few efforts were made to gather together advanced scientific information on formulation and manufacture until relatively recently. Then in the early 1940s, two important books were published that furnished valuable information for cosmetic chemists. Recent editions of works by the authors, de Navarre and Harry (entries 628 and 634), are listed here. Since the works of the 1940s appeared, scientific and technical data have not been so guarded as formerly, and comprehensive works such as that by Balsam and Sagarin (entry 625) have been published. Cosmetic products are now supported by research in regard to their formulation, manufacture, application, and use.

Listed here, in addition to works about cosmetic science and the industry, are titles covering perfume and flavoring materials. There are also specialized publications on preservation, side effects, and additives.

623. Arctander, Steffen. **Perfume and Flavor Chemicals (Aroma Chemicals)**. Volumes 1 and 2. Montclair, NJ: Steffen Arctander (P.O. Box 114, Elizabeth, NJ 08207), 1969. 2 volumes. bibliog. index. \$64.00 the set. LC 75-91398.

Intended to be a companion volume to the author's *Perfume and Flavor Materials of Natural Origin* (see entry 624), this work was written primarily to supply comprehensive, practical (but brief) information, readable not only by perfumers and flavorists in the fragrance and flavor industries, but also by chemists and others in related fields and industries. Arctander has not indicated whether the chemicals listed occur in nature or not because this is difficult to ascertain for sure, but for the most part the listing is of synthetic materials.

The work contains 3102 monographs in alphabetical order by chemical name. The index is at the end of Volume 2. Trade names are not always listed in it, but many synonyms have been included. Each monograph is about one third of a page in length and includes synonymous names, structure, formula, description, use, odor and flavor type, how produced, and whether the substance is generally recognized as safe. There are literature references by code.

The voluminous work represents an attempt to list and describe most of the aroma chemicals used today by the perfumer and flavorist. It and the author's previous work have become standards and have received considerable distribution throughout the world.

624. Arctander, Steffen. **Perfume and Flavor Materials of Natural Origin**. Elizabeth, NJ: Steffen Arctander, 1960. 736p. illus. (part col.). index.

The author of this dictionary-handbook is a perfumer and flavorist who produced the work with the assistance of the University Extension Division, Rutgers, the State University of New Jersey, and the perfume and flavor industry.

The book is in dictionary format in two separate sections. The first section, "Definitions and Methods of Processing," is the shortest (47 pages). The second section, "Monographs on Raw Materials," makes up most of the book. Odors and flavors of the raw materials of nature are described. Use of the materials, appearance, source, evaluation, constituents, the replacement of one material for another, proportional strength, availability, processing, world production figures, and other miscellaneous information is provided in the definitions. Many substances are included, and the treatment is rather comprehensive. Literature sources are usually not given; the author says he checked information personally and provided only practical material—perhaps a weakness of the book because it includes a good deal of data (e.g., production figures).

There are several tables on world production and location of centers of production. Also, there is a list that groups natural materials according to odor type and suggested use. A general index and a "French-German-Spanish Condensed Index" similar to a polyglot foreign language dictionary is appended. The book is illustrated with good photographs of production machinery and plants, some in color and in flower.

As the author correctly points out, the perfume and flavor trade has been veiled and concealed for many decades, if not for centuries. Perfumers have preferred to keep their art to themselves. Arctander hopes his book will contribute to a wider knowledge of perfumes and flavors from nature. It is, in any case, a fascinating compilation.

625. Balsam, M. S., and Edward Sagarin, eds. **Cosmetics: Science and Technology**. 2nd ed. New York: John Wiley & Sons, 1972-1974. (A Wiley-Interscience Publication). 3 volumes. bibliog. index. \$250.00 (the set). LC 75-177888. ISBN 0-471-04646-9 (Volume 1).

The first edition of this comprehensive work was published in one large volume in 1957. Its aim was to fill the need for a work that would reflect both the scientific and the craft aspects of the subject. The contributors to both editions have almost all been employees of firms that manufacture cosmetic products.

Early cosmetic literature was limited mainly to "books of secrets," and later works contained formulations and instructions, but few efforts were made until relatively recently to gather together the most advanced scientific information on all phases of cosmetic formulation and manufacture. The work under review has done a great deal to bring up-to-date and pertinent information to cosmetic chemists. Publication of the book has demonstrated that the reluctance to disclose details of technologic advances in cosmetics has been overcome.

Cosmetic science is made up of numerous related fields, and cosmetic scientists must have a vast acquaintance with often disparate aspects of the field. The editors point out that fashion changes have affected the field. Other changes have included increasing knowledge of the pharmacologic, bacteriologic, and toxicologic considerations in producing safe and useful products; expanding government regulation of color and other additives; accelerated legal controls; and the discovery of new raw materials.

Volume 1 includes chapters on creams, lotions, baby toiletries, skin lighteners, suntan preparations, beauty masks, foundation makeup, powders, rouge, lipstick, eye makeup, dentifrices, and mouthwashes. Volume 2 covers shaving preparations, depilatories, shampoos, hair-grooming preparations, permanent waving, hair straighteners, other hair products, antiperspirants and deodorants, aerosols, bath preparations, nail products, eye lotions, and fragrances. Volume 3 discusses the cosmetic industry, physiology of the skin, sensitivity testing, quality control, preservation of cosmetics, legal and regulatory affairs, color in cosmetics, emulsification, processing of alcoholic fragrance solutions, and performance and psychometric evaluation of cosmetics.

This outstanding work is important to cosmetic chemists. In addition, it covers materials, methods, and manufacturing processes also important to pharmaceutical, medicinal, and clinical chemists and perfumers.

626. Breuer, M. M., ed. **Cosmetic Science**. New York: Academic Press, 1978-1981. 2 volumes. illus. (part col.). bibliog. index. \$109.50 (the set). ISBN 0-12-133001-X; 0-12-133002-8.

Although usually considered a valuable addition to the growing body of scientific and technologic literature on cosmetics, the second volume of the work has been criticized for containing uneven subject matter. Most of the contributors to the set are from Great Britain or some other foreign country. Developments in such areas as dermatology, psychology, and environmental and consumer protection are covered, as well as the more traditional aspects of the cosmetic field.

Volume 1 includes chapters on cosmetics and dental health; the cleaning, polishing, and abrasion of teeth by dental products; cosmetic market and technology in Japan; predicting skin feel; currently used sunscreen materials; color in cosmetics; determination and analysis of sebum on skin and hair; and molecular basis of skin

irritation. Volume 2 presents information on the current state of processing technology of emulsions and suspensions; the physiology of hair growth; processes in olfactory reception; factors determining the effectiveness of sunscreen agents; and the new psychophysics and cosmetic science.

627. Council of Europe. **Natural Flavouring Substances, Their Sources, and Added Artificial Flavouring Substances.** Strasbourg, France: Maisonneuve, 1974. 463p. index. ISBN 2-7160-0043-3.

The text of this work is presented in both English and French. It discusses principles and aims regarding the Council's study of natural and artificial flavorings. Basically, the aims were to draw up a list of natural flavors based on their sources, a list of artificial flavorings that may be added to foodstuffs without hazard to health, and to draw attention to flavorings that are hazardous.

The first list, natural flavouring substances and their sources, is a table that includes the following information: Council of Europe reference number, reference number in Steinmetz's *Codex Vegetabilis* (see entry 160), Latin botanic name, English name, French name, parts of plant normally used, parts specifically prohibited, category proposed, and limitations on the active component. The next list, artificial flavouring substances which may be added to foodstuffs without hazard to public health, is by chemical classification with formula, systematic name, synonyms, and limits. The third table, artificial flavouring substances which may be added temporarily to foodstuffs without hazard to public health, is also by chemical classification with information similar to that above given. In addition, certain information that may be required is pointed out. The last table, list of artificial flavouring substances not fully evaluated, is also by chemical classification, providing information similar to that above except that it is less complete. There is an index called "Alphabetical Classification" in the two languages.

The book is difficult to use.

628. deNavarre, Maison G. **The Chemistry and Manufacture of Cosmetics.** 2nd ed. Princeton, NJ: D. Van Nostrand, 1962-1975. 4 volumes. illus. bibliog. index. (Volumes 3-4 published by Continental Press, Orlando, FL 32811).

The first edition of this pioneering work was published in 1941. Before its publication, cosmetic literature could not be taken seriously where scientific and technologic aspects were concerned. DeNavarre's works were instrumental in raising the standards of the cosmetic industry, and these volumes have become standard references for the industry.

The volumes attempt to tell the reader how to formulate cosmetic products, why the ingredients are used, and what happens if the wrong amount or improper procedure is employed. Volume 1 presents background material; Volume 2 discusses cosmetic materials; and Volumes 3 and 4 mainly present information on the formulation of products. Many formulas and literature references are included.

The work is of value to the cosmetic chemist and all those who work with perfumes, soaps, cosmetics, and drugs. The author formerly held an executive position in a cosmetic firm and has been an author, editor, and publisher of cosmetic journals.

629. Estrin, Norman F., ed. **The Cosmetic Industry: Scientific and Regulatory Foundations.** New York: Marcel Dekker, 1984. 709p. bibliog. index. (Cosmetic Science and Technology Series, Volume 2). \$95.00. LC 84-17030. ISBN 0-8247-7105-2.

Designed as a practical guide for individuals with scientific and regulatory responsibilities or interests in the cosmetic industry, this text presents an up-to-date, interdisciplinary approach to the regulatory environment. In spite of the title, scientific material is not included; the term is used only to note the relationship of science to regulatory decision making.

Forty chapters are presented, written by 47 leading authorities, arranged in three sections: (1) The regulatory environment; (2) Functioning in the regulatory environment (as an industry and as individual companies); and (3) Challenges for tomorrow.

The intended readership includes cosmetic and drug manufacturers, distributors, and suppliers; project and quality assurance coordinators; cosmetic chemists; toxicologists; regulatory agency officials; food and drug attorneys; and students in advanced undergraduate and graduate level pharmacy courses and professional society training programs.

630. Feinberg, Hilda. **Cosmetics—Perfumery Thesaurus**. Introduction by Theodore C. Hines and Jessica L. Harris. New York: CCM Information Corporation, 1972. 106p. LC 72-78536. ISBN 8409-0309-X.

Planned as a practical tool for the working indexer or designer of an indexing system, this thesaurus provides for appropriate expression of indexable matter in a consistent form as a means of preventing the same concepts from being scattered under different terms in an index. Ample cross-references are provided and relationships shown. The list can be adapted for use with a computer. Instructions on how to use the thesaurus are included.

631. Flick, Ernest W. **Cosmetic and Toiletry Formulations**. Park Ridge, NJ: Noyes Publications, 1984. 596p. \$64.00. LC 84-14771. ISBN 0-8155-0995-2.

The information in this book is of particular value to those who are interested in the development of new cosmetic and toiletry formulations or in variations in the processes of manufacture of them. There are more than 1000 formulations provided, based mainly on information supplied by industrial organizations. All of the raw materials listed are believed to be currently available, a matter of importance to those who are concerned with possible discontinuances of such.

The formulations are presented in sections on antiperspirants; baby products; bath and shower products; beauty aids and cosmetics; creams; fragrances, colognes, and perfumes; hair care products; insect repellants; lotions; shampoos; shaving products; soaps; sun care products; and miscellaneous products. Also included are sections listing trademarked raw materials and suppliers' addresses.

Each formulation gives a description of the end use, the main base chemical and modifiers employed, a list of raw materials contained therein, a description of each trademarked raw material, suggested formula modifications, key properties of the formula, and the formula source (company or organization).

632. Frost, Philip, and Stephen N. Horwitz, eds. **Principles of Cosmetics for the Dermatologist**. St. Louis, MO: C. V. Mosby, 1982. 367p. illus. (part col.). bibliog. index. \$54.95. LC 81-18816. ISBN 0-8016-1713-8.

This book is the outcome of an international symposium, Principles of Cosmetics for the Dermatologist, which brought together a group of specialists of diverse backgrounds, dermatologists, representatives of the cosmetic industry, and others. The

foreword points out that cosmetics alter the structure and function of skin and are drugs in this sense. Recent developments have broken down barriers that in the past isolated dermatologists from cosmetologists, and this book is intended to help dermatologists learn about the cosmetic products their patients use. However, it is of considerable value to a much wider group. It discusses dermatology as it relates to cosmetics and also how various ingredients act, how to test them for adverse effects, and whether to keep certain ingredients in the formulation. The book focuses on the positive effects of cosmetics.

The 43 chapters, many of them by well-known authors, are presented under these general headings: (1) Soaps and shampoos; (2) Skin surface texture modifiers; (3) Deodorants and antiperspirants; (4) Fragrances; (5) Coloring agents; (6) Hair products; (7) Nail products; (8) Sunscreens; (9) Adverse reactions to cosmetics; (10) Cosmetics for people with special requirements; (11) Use of cosmetic products in management of dermatologic problems; and (12) Classification and regulations for cosmetic products.

The book is very well done and has been highly recommended.

633. Furia, Thomas E., and Nicoló Bellanca, eds. **Fenaroli's Handbook of Flavor Ingredients**. 2nd ed. Adapted from the Italian language work. Cleveland, OH: CRC Press, 1975. illus. bibliog. index. 2 volumes. \$148.50. LC 72-152143. ISBN 0-87819-533-5.

The subject treated in these large volumes is viewed by many as a mystery, at times suggestive of alchemy. However, sophisticated analytic techniques are fully utilized by chemists in the field to resolve flavor components and to elucidate structures and also as product control measures. The flavor (and fragrance) industry is highly interdisciplinary and includes analytic, organic, physical, and natural products chemistry; botany; food technology; and several other fields, even the artistic efforts of the flavorist.

There are about 1200 flavor ingredients used in the United States. Approximately 200 are well characterized products of natural origin, and about 1000 others are precisely defined synthetics. The scope of this publication is to present an authoritative, current description of natural and synthetic flavor ingredients with their characteristics and applications.

The first part of Volume 1 is a 264-page section of "General Considerations," presenting some highly technical material. In a historical section, the evolution of flavor ingredients is summarized as follows: (1) the direct addition of dried herbs and spices to food; (2) the extraction and concentration of active ingredients of dried herbs and spices and the blending of these to imitate natural flavors; (3) the formulation of compounded flavorings; (4) the combining of extracts and synthetic products to imitate additional natural flavor ingredients and to formulate nonexistent types; and (5) the rebuilding of natural flavor ingredients and precursors through identification and synthesis of compounds.

The second section of Volume 1 lists natural flavors alphabetically with the following information given: other names, botanic source, botanic family, foreign names, description, part of plant used, physicochemical characteristics (essential oil, derivatives), organoleptic characteristics, uses, and regulatory status (safety). Products listed are familiar to people interested in herbs and spices.

Volume 2 of the set lists synthetic flavors and includes chemical data such as formula, structure, physicochemical characteristics, synthesis, and regulatory status. The last section is on uses of flavor ingredients in foods.

Long bibliographies are provided throughout this excellent, highly technical scientific work.

634. **Harry's Cosmeticology.** Edited by J. B. Wilkinson and R. J. Moore. 7th ed. New York: Chemical Publishing, 1982. 934p. illus. bibliog. index. \$95.00. ISBN 0-8206-0295-7.

The first edition of "Harry's" was published in 1940. It has had continued popularity. The work provides simple and sophisticated formulas and, in addition, basic chapters on the skin, teeth, hair, and nails. The presentation is scholarly, with many literature references included to allow for further study.

There are five sections: (1) The skin and skin products; (2) The nails and nail products; (3) The hair and hair products; (4) The teeth and dental products; and (5) Product ingredients and manufacture. Specific discussions and formulas are included on the following: skin creams, astringents and skin tonics, protective creams and hand cleaners, bath preparations, skin products for babies, skin products for young people, antiperspirants and deodorants, depilatories, shaving preparations, foot preparations, insect repellents, sun products, skin lighteners or bleaches, face packs and masks, face powders and makeup, colored makeup preparations, manicure preparations, shampoos, hair products, dentifrices, and mouthwashes.

There is an appendix listing proprietary materials cited in the book.

635. Jellinek, J. Stephen. **Formulation and Function of Cosmetics.** Translated from the German by G. L. Fenton. New York: John Wiley & Sons, 1970. (A Wiley-Interscience Publication), 1970. 586p. bibliog. index. LC 74-110170. ISBN 0-471-44150-3.

There were two German language editions of this work before it was translated into this English edition. It draws heavily on literature from European countries. The approach and purpose of the book are somewhat different from those of most other books on the formulation of cosmetics. It does not primarily inform the reader of new cosmetic preparations or raw materials; instead it emphasizes why these preparations are compounded as they are and discusses the function of the various raw materials. The chemical and physiologic principles involved are stressed.

These chapters are included: (1) Skin and hair; (2) Surfactants in cosmetics; (3) Microbiological aspects of cosmetics; (4) The composition of cosmetic preparations; (5) Cleansing preparations; (6) Deodorant and antiperspirant preparations; (7) Protective preparations; (8) Emollients; (9) Preparations with depth effect; (10) Decorative preparations: preparations with surface effect; (11) Decorative preparations with lasting effect (e.g., hair dyes); and (12) Preparations for enjoyment (e.g., bath preparations). In addition, there is a section on perfuming and coloring cosmetic preparation and also a table of incompatibilities.

Cosmetic chemists, manufacturers of cosmetic raw materials, organic chemists, dermatologists, beauticians, and beauty editors should be interested in the book.

636. Kabara, Jon J., ed. **Cosmetic and Drug Preservation: Principles and Practice.** New York: Marcel Dekker, 1984. 765p. illus. bibliog. index. (Cosmetic Science and Technology Series, Volume 1). \$99.75. LC 84-15603. ISBN 0-8247-7104-4.

This is the first volume of a series initiated to permit discussion of the broad spectrum of current knowledge and theories of cosmetic science and technology. Well-known authorities have contributed to the series. This volume provides an overview of

product preservation ranging from the theory of the mechanism of preservation action to practical applications.

It is difficult to find harmless yet effective preservatives that have the necessary attributes. For instance, they need to be effective in oil and water systems that contain many ingredients. The book considers most of the commercially available preservatives, test procedures, formulations, and safety factors.

There are 29 chapters grouped in these sections: (1) Basic considerations for cosmetic preservation; (2) Chemical, physical, and microbiological properties of common preservatives; (3) Sterilant gases and radiation; (4) Use of multifunctional chemicals in preservative systems; (5) Formulation principles involved in cosmetic preservation; and (6) Safety, toxicological, and regulatory issues. In addition, there are two substantial appendices. The first presents microbiologic methods for cosmetics. The second, "Antimicrobial Preservatives Used by the Cosmetic Industry," is about 140 pages long and includes history and background information, a table of antimicrobial preservatives used in cosmetics, and a monographs section. The latter provides names of the substances, identifying numbers (European Economic Community and Chemical Abstract Service), type of compound, structure and chemical properties, antimicrobial spectrum, toxicity, cosmetic applications, other applications, supplier, and literature references.

Intended readership includes cosmetic chemists, microbiologists, cosmetic formulators, fragrance specialists, dermatologists, research pharmacists, and other research scientists involved in work on topical products.

637. Nater, Johan P., and Anton C. de Groot. **Unwanted Effects of Cosmetics and Drugs Used in Dermatology**. Coauthor for the section on cosmetology: Dhiam H. Liem. Amsterdam, The Netherlands: Excerpta Medica, 1983. 483p. bibliog. index. \$115.00. LC 82-15791. ISBN 90-219-3073-0.

The aim of this encyclopedic work is to bring together published information on unwanted effects of drugs used in dermatology and cosmetic substances. It is intended primarily for the dermatologist, but those working in the pharmaceutical and cosmetics industries, clinical pharmacists, and those in drug information centers will find it of practical value. Most of the material is presented in tables, with text kept to a minimum. There are a large number of literature references; the Excerpta Medica database system was used to screen the literature.

The presentation is in several sections: (1) Local side effects of topical drugs; (2) Systemic side effects of topical drugs; (3) Dermatitis medicamentosa and photochemotherapy; (4) Side effects of systemic drugs used in dermatology; and (5) Side effects of cosmetics. An extensive list of cosmetic and pharmaceutical ingredients is given with recommended patch-test concentration, vehicles, estimated frequencies of sensitization, and the like.

The book contains a wealth of information, but it is very nearly inaccessible because the index is so brief. There is a classified arrangement of the material, but specific information must be searched for.

638. Pharmaceutical Manufacturers Association. **Color Additives Guide**. Washington, DC: Pharmaceutical Manufacturers Association, 1970. index. Looseleaf.

The Pharmaceutical Manufacturers Association recognized the need for a compilation of information on color additives that could be used in pharmaceutical

preparations in many countries of the world and undertook the preparation of the guide. A number of overseas agencies cooperated. Revised pages have been distributed to keep the publication up to date.

There is a page for each color additive, and these are arranged alphabetically by name in sections divided by appropriately colored-tabbed separators; that is, one looks for red colors behind the red separator. There are no page numbers.

Information provided about each additive includes alternative names, color index number, Schultz number, and European Economic Community number. A list of countries follows, with an indication of whether the color is permitted or restricted in any way. There is a "Reference Section" that serves as an index.

639. Poucher, W. A. **Perfumes, Cosmetics and Soaps**. Volume 1, **The Raw Materials of Perfumery**. Revised by George M. Howard. 7th ed. Volume 2, **The Production, Manufacture and Application of Perfumes**. 8th ed. Volume 3, **Modern Cosmetics**. Revised by George M. Howard. 8th ed. London, England: Chapman and Hall; New York: John Wiley & Sons, 1974. 3 volumes. illus. index. \$52.00 per volume. LC 74-8885, 74-8883, 74-8882. ISBN 0-470-69558-7; 0-470-69559-5; 0-470-69560-9.

Volume 1 of this comprehensive "bible" of the perfumery, cosmetics, and soap field is a dictionary of natural and synthetic raw materials, which also includes descriptions of their properties and applications. Arrangement is alphabetical with cross-references provided. This volume only has no index, but none is needed.

Volume 2 begins with a historical sketch of the use of perfume and cosmetic materials (1). Other chapters cover: (2) The production of natural perfumes; (3) The purchase and use of flower absolutes; (4) Odour classification and fixation; (5) Monographs on flower perfumes; (6) Miscellaneous fancy perfumes; (7) Toilet waters; (8) Soap perfumery; (9) Tobacco flavours; (10) Floral cachous; (11) Incense and fumigants; (12) Sachets and solid perfumes; and (13) Fruit flavours.

Volume 3 presents the following chapters: (1) Aerosols; (2) Antiperspirants and deodorants; (3) Bath preparations; (4) Dental preparations; (5) Depilatories; (6) Hair preparations; (7) Hair colourants; (8) Lipsticks; (9) Manicure preparations; (10) Men's toiletries; (11) Rouges and eye cosmetics; (12) The skin preparations for the face and hands; (13) Sunburn preparations; and (14) Toilet powders.

Included throughout Volumes 2 and 3 are many typical formulas for products.

640. Vernin, G., ed. **Chemistry of Heterocyclic Compounds in Flavours and Aromas**. Chichester, England: Ellis Horwood; New York: Halsted Press, a division of John Wiley & Sons, 1982. 375p. illus. bibliog. index. (Ellis Horwood Series in Chemical Science.) \$89.95. LC 82-3034. ISBN 0-85312-263-6. (Ellis Horwood); 0-470-27336-4 (Halsted Press).

Although this book is addressed mainly to those involved with food flavors, it is of interest also to organic chemists and biochemists, analysts, consultants, and chemical engineers involved in the manufacture or research of pharmaceuticals, perfumes, and odorants. The work is comprehensive, dealing with the chemistry of all known heterocyclic flavoring and aroma compounds, their formation from precursors, their occurrence, and their use. The role of mass spectrometry in analysis and the identification of flavoring substances is also covered.

Chapter headings are: (1) Heterocyclic aroma compounds precursors; (2) Heterocyclic aroma compounds in foods: occurrence and organoleptic properties; (3) Mechanisms of formation of heterocyclic compounds in Maillard and pyrolysis

reactions; (4) General synthetic methods for heterocyclic compounds used for flavourings; (5) Computer application of non-interactive program of simulation or organic synthesis in Maillard's reaction: a proposition for new heterocyclic compounds for flavours; (6) Recent techniques in the analysis of heterocyclic aroma compounds in foods; (7) Mass spectrometry of heterocyclic compounds used for flavouring; and (8) The legislation of flavours.

641. Wells, F. V., and Marcel Billot. **Perfumery and Technology: Art, Science, Industry**. 2nd ed. Chichester, England: Ellis Horwood; New York: Halsted Press, a division of John Wiley & Sons, 1981. 449p. illus. bibliog. index. \$110.00. LC 80-42130. ISBN 0-85312-301-2 (Ellis Horwood); 0-470-26958-8 (Halsted Press).

The first edition of this work was a bestseller the world over. This second edition was revised and enlarged by Wells; Billot, a noted French perfumer, died in 1979. Wells was formerly editor of a cosmetics journal.

Although the world's perfumery industry has undergone extensive technologic and organizational changes of recent decades, there are few books on the subject. This one was written as a compendium of information on the nature and practice of perfumery. The raw materials of the perfumer are classified and described, information provided on how the various products are augmented, and how they are manufactured and packaged. In addition, formulas have been included to serve as guidelines to individual effort.

Chapter headings are as follows: (1) The study and practice of perfumery; (2) Historical and biographical; (3-5) The perfumer's raw materials: products of natural origin; (6) The perfumer's raw materials: odorants of synthetic origin; (7) Classification of odours and odorants; (8) Creating a perfume; (9) Formulary section: flower perfumes; (10) Formulary section: sophisticated or fantasy perfumes; (11) Colognes: eaux de toilette: perfumes for men; (12) Olfaction and gustation: the perception and senses of smell and taste; (13) Perfumes for many purposes; (14) Packaging and marketing; (15) Perfumery as a career; (16) Manufacturing processes; (17) Concerning flavours; and (18) Analysis and instrumentation.

The possible audience for the book includes interested laypersons; experienced perfumers; students; journalists; lecturers; and those engaged in the presentation, publicizing, and marketing of perfumes and perfumed products. The special objective, however, according to the authors is to provide a reference work for the professional perfumer but also one that will prove useful as a text for the trainee. In addition to covering the field quite comprehensively, the book is well written and fascinating to read.

18 Drug Abuse

Because of the abuse of drugs by large segments of society all over the world, a large number of publications on the subject have been published. Only a small percentage of such materials are listed here because other bibliographies are available that treat the subject more fully. These are Andrews' *A Bibliography of Drug Abuse, Including Alcohol and Tobacco* and *A Bibliography of Drug Abuse: Supplement, 1977-1980* (entries 3, 4). For the most part, the publications listed in this section are scientific in nature, although the aforementioned bibliographies cover virtually all aspects of substance abuse.

A number of the titles listed deal with drug abuse somewhat generally. Others cover specific aspects of the subject such as history, drug effects, analytic methods involving drugs of abuse, the abuse of prescribed drugs, psychoactive plants, international control of narcotic drugs, current developments in the field, and research issues. Drugs dealt with separately include marijuana, hallucinogens, alcohol, and narcotics.

642. Abel, Ernest L. **Marihuana: The First Twelve Thousand Years.** New York: Plenum Publishing, 1980. 289p. bibliog. index. \$17.95. LC 80-15606. ISBN 0-306-40496-6.

This is a readable account of the history of man's use and abuse of the marijuana plant, beginning in earliest times. The material is divided into four sections, each of which contains five chapters. Section I, "The Early Years," concerns the use of the plant in the ancient world and covers China, India, Persia, the Scythians, Babylonia, Palestine, Egypt, Greece, Rome, and the Arabs. The plant was used both as a source of fiber and for its pharmacologic effects. The second section, "The Hemp Era," is concerned with the use of marijuana for making fiber, particularly rope. The third section, "Marihuana and the Hashish Era," deals mainly with the plant's use as a drug in the Western world.

The final section, "A Nation of Drug Takers," deals with marijuana use in America from about 1850 to the present. In it the author discusses the factors that led to the current laws regarding cannabis use in the United States. He stresses economic effects, class struggle, and racism. Some reviewers feel that Abel has oversimplified in this area and that the reasons history took the course it did are exceedingly complex.

The last pages of the book deal with the scientific aspects of the subject. The treatment is rather sparse and incomplete and not so well handled as the historical sections. Little is said about the effects of marijuana, particularly the adverse, and the potential therapeutic uses.

The author closes with the prophecy that "Whatever marihuana's past its future will inevitably be that of decriminalization and eventual legalization." Further, he thinks that "If the past is any example, instability, lack of progress, and immorality will or will not occur regardless of whatever happens where marihuana is concerned."

643. Agurell, Stig, William J. Dewey, and Robert E. Willette, eds. **The Cannabinoids: Chemical, Pharmacologic, and Therapeutic Aspects**. New York: Academic Press, 1984. 909p. illus. bibliog. index. \$88.00. LC 83-24444. ISBN 0-12-044630-0.

Most of the papers presented in this volume were written by scientists who presented scientific data at a meeting held in Louisville, KY, in 1982 after the combined meetings of the American Society of Pharmacology and Experimental Therapeutics and the Society of Toxicology. Articles on scientific aspects of marijuana and its constituents appeared as early as 90 years ago. Further work was sporadic until the 1960s, when delta-9-tetrahydrocannabinol was identified as the active constituent of marijuana. Through the late 1960s and 1970s continued advances were made in understanding various aspects of marijuana. Then interest in the subject declined, except for the study of potential medical uses of the cannabinoids. The intent of this book is to present current scientific advances on the subject without the controversial issues of legality or morality of the use or abuse of the drugs.

About 60 papers are presented in the book, grouped in sections as follows: (1) Clinical aspects; (2) Chemical aspects; (3) Metabolic and pharmacokinetic aspects; (4) Reproductive aspects; (5) Neuropharmacologic aspects; (6) Cellular aspects; and (7) Therapeutic aspects.

644. Berman, Eleanor. **Analysis of Drugs of Abuse**. New York; London; Rheine: Heyden and Son, 1977. 80p. bibliog. index. (Heyden International Topics in Science). \$11.00. ISBN 0-85501-226-9.

Although a small work, this book presents a "critical review of the analytical methods used in toxicological investigations" and gives applications of these methods to the analysis of various drugs of abuse. The author has had considerable experience in this area. The importance of clinical factors is stressed in reaching a decision as to whether a particular drug has been used and in assessing its significance.

The following chapters are presented: (1) What is drug abuse? (2) Classes of compounds called drugs; (3) Evolution of drug separation technology; (4) Development of methods of drug identification; (5) Techniques of drug identification; (6) Chromatography; (7) Immunochemical methods; (8) Do a toxicology! (9) Evaluation of drug analysis techniques; and (10) Therapeutic monitoring. An appendix contains absorption spectra of various drugs.

Analytic chemists have criticized the book on a number of counts: it is too brief; there are unnecessary errors (e.g., peyote is called a mushroom instead of a cactus);

some methods are given too little attention; and it is difficult to see for whom the book is intended. On the positive side, analysts consider the last three chapters to be well done; many references to more comprehensive works have been included; and the book is a welcome addition to the limited literature on an important subject.

645. Blum, Kenneth. **Handbook of Abusable Drugs**. New York: Gardner Press, 1984. 721p. illus. bibliog. index. \$79.95. LC 83-5667. ISBN 0-89876-036-4.

The purpose of this handbook is to point out linkages between scientific phenomena and social behavior. More specifically, the book illustrates what is called social pharmacology, or the exploration of interrelationships among drugs, individuals, and society. It provides the reader with a detailed, critical review of the biochemical, pharmacologic, and sociologic aspects of drugs of abuse. The handbook is an outgrowth of a request by the National Institute of Drug Abuse to compile all available data on the pharmacology and toxicology of commonly abused drugs. Each chapter presents a discussion of a particular substance abuse problem.

Chapter headings are: (1) The background for abuse; (2) Some general social pharmacologic aspects of substance abuse; (3) Basic pharmacologic considerations and principles; (4) Classification of psychoactive drugs; (5) Narcotics; (6) Pharmacology and clinical applications of narcotic antagonists; (7) Methadone and other narcotic maintenance drugs: pharmacologic issues, myths, and realities; (8) Internal opioids: a look into the future; (9) CNS depressants: sedative-hypnotics (barbiturates and nonbarbiturates); (10) Solvent and aerosol inhalants ("glue sniffing"); (11) Alcohol: the world's most devastating drug; (12) Central nervous system stimulants ("the uppers"); (13) Tranquilizing agents; (14) Antidepressants and antimania drugs (mood elevators and stabilizers); (15) Tobacco and smoking behavior; (16) Over-the-counter (OTC) drugs; (17) Marijuana: heaven or hell; (18) Psychedelics: brave new world; (19) Psychotropic drug interactions; (20) Influence of psychopharmacologic agents on sexual function: "psychopharmacosexology"; and (21) Epilogue: Drug Odyssey 2001." There are two appendices, a glossary of street and scientific terms and a psychopharmacologic classification of drugs. Notable features of the work include many tables of information about drugs and extensive bibliographies with each chapter. There is also a special author index of the names of authors referred to in the text.

The book contains material of both theoretical and practical importance and interest to behavioral scientists, clinicians, pharmacologists, biochemists, other scientists, and interested laypersons.

646. Clouet, Doris H., ed. **Narcotic Drugs: Biochemical Pharmacology**. New York: Plenum Publishing, 1971. 506p. bibliog. index. LC 76-128503. ISBN 0-306-30495-3.

The molecular history of narcotic drugs in the body and the biochemical consequences of their presence in the tissues are treated in this book. There has been a need for such information to understand the addiction process, and it is possible to do so more fully at this time because of advances made in the field of molecular biology. The material, which is presented by noted authorities, is divided into the following sections: (1) The chemistry of narcotic analgesic drugs; (2) The metabolic disposition of narcotic analgesic drugs; (3) The effects of narcotic analgesic drugs on general metabolic systems; (4) The effects of narcotic analgesic drugs on specific systems; (5) Sites of action of narcotic analgesic drugs; (6) Tolerance and dependence; (7) Electrophysiological studies in man; and (8) Pharmacologically based therapeutic programs in man. Some chapters are of interest to scientists working on the basic aspects of drug

dependence, and some chapters provide background for clinicians interested in therapy for addicts. The material is quite technical and suitable mainly for biochemists, pharmacologists, behavioral and social scientists, neurobiologists, medical researchers, and public health officials.

647. Cohen, Sidney, ed. **Drug Abuse and Alcoholism: Current Critical Issues**. New York: Haworth Press, 1981. 62p. bibliog. (Collected Essay Series). \$6.95pa. LC 79-25648. ISBN 0-917724-10-0.

Some of the material included in this collection of essays has been reprinted from other sources. It is a scholarly but clearly presented analysis of the current scene in substance abuse. The editor points out that change marks this scene. New therapies rise—and fall, new prevention techniques are generated, and new problems arise, although the old ones remain unresolved.

Seven reviews written by various experts on important facets of substance abuse are included. Titles are: (1) Street drugs 1977: changing patterns of recreational use; (2) Marihuana—our next step; (3) The psychosocial characteristics of alcoholic women; (4) The identification and management of alcoholic and depressive problems; (5) Heroin maintenance: the second time around; (6) Hypnotic drug therapy; and (7) Forensic psychopharmacology: the drug abuse expert in court. Also included is a glossary of key terms.

Although the publication is most suitable perhaps for the advanced reader, it is recommended for all because it deals with drug problems that should be understood and dealt with.

648. Cohen, Sidney, Charles Buchwald, Joel Solomon, James Callahan, and Daniel Katz, eds. **Frequently Prescribed and Abused Drugs: Their Indications, Efficacy, and Rational Prescribing**. Reference edition. New York: Haworth Press, 1982. 80p. bibliog. index. \$20.00. LC 81-20222. ISBN 0-86656-115-3.

A group of knowledgeable researchers and clinicians in the field of drug abuse originally developed this work for the career Teachers Center, State University of New York, Downstate Medical Center. This reprinted edition, called a reference edition, has had a preface and index added. Although the book is brief, it covers the major areas of drug abuse, ones that health professionals should be most aware of because medicinal agents are being diverted for other than therapeutic purposes. A great deal of material is presented in succinct fashion.

Six well-written chapters are presented: (1) Drug abuse and the prescribing physician; (2) Psychotropic drug interactions; (3) Anxiety: its meaning and psychotropic drug treatment; (4) The prescription of stimulants and anorectics; (5) Pain; and (6) The prescription of hypnotic drugs.

A unique feature of the book is that it may be used by American physicians for continuing medical education units by their making use of the pretest and post-test included.

649. Cohen, Sidney. **The Substance Abuse Problems**. New York: Haworth Press, 1981. 392p. bibliog. index. \$29.95; \$19.95pa. LC 80-21280. ISBN 0-917724-18-6; 0-917724-22-4pa.

Earlier versions of most of the chapters in this book were published in the Vista Hill Foundation's *Drug Abuse and Alcoholism Newsletter*, volumes 1-8, 1972-1979. Dr.

Cohen, former director of the division of Narcotic Addiction and Drug Abuse, U.S. National Institute of Mental Health, and now a Clinical Professor of Psychiatry, is probably the leading authority today on substance abuse, and his book has been cited frequently by other experts as being a landmark in the field. It is medically and scientifically correct and accurate and is a remarkable overview of the subject. In addition, it is written so clearly (and with wit besides) that the novice can understand it. Professionals also, of course, have found it of value, especially because the drug field is so plagued by conflicts of opinion between factions, by poor writing, and a failure to separate speculation from facts supported by research findings.

The work contains 69 essays divided into sections as follows: (1) Drugs: legal and illegal; (2) Epidemiology and trend analysis; (3) Diagnosis; (4) Treatment; and (5) Special groups and situations. The coverage is quite diverse, including, in addition to the narcotic and danger drugs of abuse, alcohol, tobacco, marijuana, solvent abuse, polydrug use, household hallucinogens, tranquilizers, and sleeping pills. The special situations and special groups covered include alcoholic adolescents; geriatric drug abuse; alcoholism and women; the drug-dependent paraplegic; drugs and sports; aggression, drugs, and sexuality; and psychotropic drug interactions.

The book is suitable to be read straight through, or it can be read selectively for reference use.

650. Cox, Terrence C., Michael R. Jacobs, A. Eugene Leblanc, and Joan A. Marshman. **Drugs and Drug Abuse: A Reference Text**. Toronto: Addiction Research Foundation, 1983. 583p. bibliog. index. \$29.50pa. ISBN 0-88868-073-2.

An excellent source of information about psychoactive drugs, this well-written reference work is intended particularly for nonhealth professionals, educators, counselors, law enforcers, social workers, writers, and editors. The book can be easily read and understood by most students also.

The book is divided into six sections. "Understanding Drug Use" presents background information, covering pharmacologic action, why drugs are abused, sources of drugs, their identification, and abuse potential.

"Drug Classes" discusses the main classes of drugs of abuse, including sedatives and hypnotics, hallucinogens, narcotic analgesics, mood modifiers, and stimulants.

The third section, "Individual Drugs," discusses major drugs of abuse under such headings as synopsis, drug source, trade names, street names, combination products, medical uses, physical appearance, dosage, route of administration, effects, lethality, tolerance and dependence, patterns of use, and abuse potential. The drugs included in this section are those that have the greatest current popularity in North American society.

Section 4, "Other Drugs of Interest," deals with less commonly abused drugs such as *Amanita Muscaria*, amyl nitrite, nitrous oxide, opium, and peyote.

Section 5, "Additional Drug Notes," contains brief information on some drugs that attract limited attention in our society, but which may come to the attention of professionals only occasionally. A total of about 125 drugs are described in the book.

Section 6 provides these lists: (1) Trade names of single-entity prescription products; (2) Glossary of medical/scientific terms; and (3) A glossary of street drug language.

The book focuses mainly on the pharmacology of drugs of abuse, but such areas as psychology, medicine, chemistry, and epidemiology are also considered.

651. Emboden, William. **Narcotic Plants**. Rev. and enl. ed. New York: Macmillan Publishing, 1979. 206p. illus. (part col.). bibliog. index. \$15.95. LC 79-11758. ISBN 02-535480-9.

This is the second edition of a successful 1972 publication that was perhaps the first comprehensive book of its kind on psychoactive plants. It presents an overview of the historical and contemporaneous use of psychoactive drugs throughout the world. The disciplines of botany, chemistry, anthropology, and archeology are integrated to explain the curious uses of the plants throughout history. The author, a professor of botany at California State University at Northridge and research associate in botany at the Natural History Museum in Los Angeles, hopes the reader can learn something about narcotic plants and that the book will help clear up misconceptions, particularly so that more informed decisions can be made by legislators, teachers, and users of the plant drugs.

Emboden discusses how drugs have been used in almost every civilization of the ancient and modern world and how they have influenced the arts, religion, science, and medicine. Most ancient civilizations used them in magical and religious contexts, in foretelling the future, in communicating with the dead, and in withstanding the duress of harsh environments.

There are chapters on hypnotics (the sedatives and tranquilizers), tobacco (the enigmatic narcotic), hallucinogens, stimulants, and inebriants. In addition, two appendices cover a proposed structuring of some known mind-altering plant chemicals and a summation of the botany, geography, psychopharmacology, and chemistry of narcotic plants. The latter is an abbreviated synopsis of the plants figured in the text. The following information is given about each: scientific name, common name(s), family habitat, botanic description, primary narcotic effect, and active principle(s).

Emboden passes little judgment on the individuals who use psychoactive drugs today. He points out that every civilization has had to decide whether use of a certain drug constitutes a socially acceptable pastime or violates a legal or social sanction.

The work is well done, and the illustrations, as in the original edition, are exceptionally fine.

It should be noted that the author has used the term "narcotic" in a very broad sense. A number of the substances discussed (e.g., coffee, tobacco, and *Rauwolfia*) are not ordinarily considered narcotics.

652. **Estimated World Requirements of Narcotic Drugs: Statement Issued by the International Narcotics Control Board**. New York: United Nations, 1978-. Annual with monthly supplements.

This publication is a reference document for national administrations responsible for narcotic drug control and for international bodies concerned. It continues an earlier publication called *Estimated World Requirements of Narcotic Drugs and Estimates of World Production of Opium*, initiated in 1969.

Included usually in the document is a short introductory note, estimates of narcotic requirements for medical and scientific purposes, and world totals of estimated requirements of the narcotic drugs for the past five years. The bulk of the publication, however, is taken up by four comprehensive tables as follows: (1) Estimated world requirements of narcotic drugs in the current year; (2) Estimates of opium products for the current year; (3) Estimates of the cultivation of the opium poppy for purposes other than the harvesting of opium in the current year; and (4) Estimated manufacture of

synthetic drugs in the current year. There is an index by country and nonmetropolitan territories.

The supplements are issued to supply governments with amendments made during the month prior to the publication date of each supplement.

653. Goldstein, Dora B. **Pharmacology of Alcohol**. New York: Oxford University Press, 1983. 179p. bibliog. index. \$24.95; \$16.95pa. LC 82-7939. ISBN 0-19-503111-3; 0-19-503112-1pa.

The intent of the author of this small book is to write about experimental pharmacology, illustrating it with techniques and principles applied to the study of alcohol. Included are descriptions of well-controlled experiments that provide examples of methods of experimental pharmacology and information about alcohol as well.

Chapter headings are: (1) Absorption, distribution, and elimination of ethanol; (2) Acetaldehyde; (3) The liver; (4) Biophysical pharmacology: alcohol effects on biomembranes; (5) Alcohol and high-density lipoproteins; (6) Acute intoxication; (7) Tolerance; (8) Physical dependence; (9) Voluntary intake of ethanol by laboratory animals; (10) Genetics; (11) Interaction of ethanol with neurotransmitter systems; (12) Alcohol and the endocrine system; and (13) A note on fetal alcohol syndrome.

The book is designed primarily for health scientists, but it has wide appeal as an introduction to the pharmacology of alcohol.

654. **Grassroots: A Comprehensive Alcohol and Drug Information Service**. Hollywood, FL: U.S. Journal of Drug and Alcohol Dependence (2119-A Hollywood Blvd., Hollywood, FL 33020), 1971-. Looseleaf. \$80.00 per year.

This publication, although curious and unconventional in format, is quite valuable for those wanting information on current developments in the substance abuse field. Materials covering various aspects of the subject are sent out monthly to subscribers to be inserted in looseleaf binders. The material is reprinted from many sources. In addition, some pamphlet and newsletter publications are included with the subscription. Fifteen subject areas are included: treatment and rehabilitation, education and prevention, research, special populations, criminal justice, employee assistance, street drugs, alcohol, sedative-hypnotics, narcotics, stimulants, hallucinogens, cannabis, other drugs, and meetings and resources. Books, films, and other audiovisuals are evaluated.

Grassroots materials are of particular use to students preparing papers on various aspects of drug abuse. They are also of value to counselors, therapists, program administrators, educators, prevention specialists, human service providers, and researchers.

The publication was initiated in 1971 by STASH (Student Association for the Study of Hallucinogens, Inc.) in Wisconsin. This group, while obviously sincere in its efforts to help the troubled, was more sympathetic to drug use than many. The attitudes of the 1960s are still somewhat evident in the publication. The amount of material sent to subscribers has decreased of recent years.

655. Hafen, Brent Q., and Brenda Peterson. **Medicines and Drugs: Problems and Risks, Use and Abuse**. 2nd ed. Philadelphia, PA: Lea & Febiger, 1978. 429p. bibliog. index. \$12.95pa. LC 78-5901. ISBN 0-8121-0637-7.

Prepared by two members of the Department of Health Sciences of Brigham Young University, this book is designed especially for use as a text in service courses on

drugs and society or drug abuse in health education or psychology. It also will be of interest and value to those affected one way or another by a drug problem by helping them understand its nature. Material has been gleaned from many sources and compiled to provide the reader with understanding and insights into risks, benefits, and problems related to the therapeutic use of drugs and the abuse of these and illicit drugs. The subject has been treated comprehensively, sensibly, and well.

The authors' view is that too liberal use of over-the-counter products and liberal prescribing practices of some physicians have contributed to drug abuse. Although sincere efforts have been made to improve drug safety and advertising honesty, consumers cannot rely alone on these safeguards. The nature of the risks should be realized. The first chapters deal with the therapeutic use of drugs, the latter with abuse.

Chapter headings are as follows: (1) The health value of drugs; (2) Over-the-counter drugs; (3) Prescription drugs; (4) Drug development and safety; (5) Drug hazards and actions; (6) Drugs and pregnancy; (7) The problem and risk of drug abuse; (8) Motivational aspects of drug abuse; (9) The effect of mass media on drug abuse; (10) Drug dependence; (11) The social and psychological impact of drug abuse; (12) Legal control of drugs; (13) Alcohol and alcoholism; (14) Smoking; (15) Common stimulants; (16) Hypnotics and minor tranquilizers; (17) The narcotics; (18) Marijuana; (19) The hallucinogens; (20) Volatile substances; (21) Treatment and rehabilitation of the drug dependent; and (22) Preventing drug abuse. In addition, a glossary of technical terms has been provided.

656. Hofmann, Frederick G. **A Handbook on Drug and Alcohol Abuse: The Biomedical Aspects**. 2nd ed. New York: Oxford University Press, 1983. 329p. bibliog. index. \$27.50; \$14.95pa. LC 82-18930. ISBN 0-19-503056-7; 0-19-503057-5pa.

This excellent book, written by a professor of pharmacology, has been revised to include some new material. The first edition was well received. The work provides a comprehensive source of information about drugs that are commonly abused, and the discussions are quite well written. An attempt is made to separate facts from fiction. Such issues are raised as why people start using drugs in the first place, why some abstain from use or abandon drugs after preliminary experimentation, whether LSD or marijuana causes chromosomal damage and birth defects, and whether we need stricter laws of some kind or legalization of drug use. Major emphasis is on the clinical effects of drug use on human beings.

The following topics are covered: (1) Introduction; (2) Some general aspects of drug abuse; (3) Narcotic drugs; (4) Generalized depressants of the central nervous system: alcohol, barbiturates, and other drugs exerting similar effects; (5) Generalized depressants of the central nervous system: volatile solvent and aerosol inhalation ("glue sniffing"); (6) Hallucinogens: LSD, phencyclidine, and other agents having similar effects; (7) Hallucinogens: marijuana, hashish, and atropinic drugs; (8) Central nervous system stimulants; (9) The medical diagnosis of drug abuse; (10) Management of selected clinical problems: pharmacologic aspects; and (11) Drug abuse and the law.

Chapters 9 and 10 present practical information on the medical diagnosis of drug abuse and the management of certain problems. The last chapter, which considers the legal aspects of the drug problem, is also notable, pointing out very good and not often mentioned reasons for not legalizing marijuana, at least at the present time. Not enough is known about the consequences of various patterns of usage; the potency of marijuana varies; it is difficult to analyze the material or even describe it in regard to its composition; it is possible to determine the active principles of marijuana (or metabolites of them) in blood only with the resources of a modern research laboratory.

The book is recommended for students and practitioners of the health professions particularly, but it is also suitable for educators and others who may be interested, at least with the help of a medical dictionary.

657. Jacobs, Barry L., ed. **Hallucinogens: Neurochemical, Behavioral, and Clinical Perspectives**. New York: Raven Press, 1984. 233p. bibliog. index. (Central Nervous System Pharmacology Series, Volume 9). \$54.50. LC 82-42608. ISBN 0-89004-990-4.

Coincident with the rising recreational use of hallucinogens, there has been a growing interest in the biologic bases or mechanisms of action of these drugs. The major focus of this volume is to present an up-to-date account of current research on these mechanisms. The approach is interdisciplinary, with little overlap among the contributions.

The work is presented in these sections: introduction, behavioral pharmacology, neurochemistry, neurophysiology, and synthesis. There are nine chapters by various researchers. Chapter headings are: (1) The natural history of hallucinogens; (2) Effects of hallucinogens in humans; (3) Effects of hallucinogens on unconditioned behaviors in animals; (4) Behavioral pharmacology of hallucinogens in animals: conditioning studies; (5) Medicinal chemistry and structure-activity relationships of hallucinogens; (6) Common neurochemical correlates to the action of hallucinogens; (7) LSD and serotonergic dorsal raphe neurons: intercellular studies in vivo and in vitro; (8) Postsynaptic serotonergic action of hallucinogens; and (9) LSD: the bridge from human to animal.

The work is suitable for students and professionals in neuroscience, psychology, physiology, pharmacology, and psychiatry.

658. Mulé, S. J., and Henry Brill, eds. **Chemical and Biological Aspects of Drug Dependence**. Cleveland, OH: CRC Press, 1972. 561p. illus. bibliog. index. \$39.95. LC 72-191695. ISBN 0-8789-011-2.

This monograph was produced because drug dependence has reached epidemic proportions, and its treatment and prevention have brought mainly disappointing results. As a reference work, it provides the scientist with basic knowledge and background information on the chemical and biologic bases of drug dependence. The characteristics of each class of drugs are described and, as much as possible, correlated with the capacity to induce drug dependence. The work offers theories on how tolerance and dependence develop, with attention to biochemical mechanisms as well.

Many experts contributed these technical papers, which are arranged in the following sections: (1) Significance and characteristics of drug dependence; (2) Criteria for evaluating drug dependence; (3) Chemical aspects of drug dependence; (4) Physiologic and pharmacologic aspects of drug dependence; and (5) Biochemical aspects of drug dependence. Although most of the papers in the book are too technical for the average reader, there is much information of general interest.

659. Nahas, Gabriel G. **Keep Off the Grass: A Scientific Enquiry into the Biological Effects of Marijuana**. Preface by Jacques Yves Cousteau; foreword by Prof. Andre Cournand, Nobel Prize in Medicine and Physiology. Oxford, England; New York: Pergamon Press, 1979. 259p. illus. bibliog. index. \$14.00; \$9.95pa. LC 78-41170. ISBN 0-08-023779-7; 0-08-023780-0pa.

The first edition of this work (with a different subtitle) was published in 1976. The new edition also presents scientific and medical evidence that the layperson can

understand on the dangers of marijuana use. Since the first edition appeared, more evidence has accumulated from new studies that further suggests deleterious effects of the drug on the body.

Dr. Nahas is a crusader who makes powerful arguments for his stand against marijuana use. It is of note that his views are not so controversial any more.

The book reports on cannabis use in a number of countries as well as in the United States, as the chapter titles show: (1) Englewood, 1969; (2) The history of marijuana; (3) A sabbatical leave; (4) An international problem; (5) Debate; (6) First scientific meetings on marijuana; (7) Marijuana and social reformers; (8) First investigations; (9) Journey to Morocco; (10) Journey to Egypt; (11) The Marijuana Commission Report; (12) A working summer; (13) Return to Morocco; (14) Marijuana and the immunity system; (15) From Texas to Alaska to Washington, D.C.; (16) Marijuana and DNA; (17) From Vancouver to Baalbek; (18) A press release; (19) The Senate hearings; (20) The quest continues; (21) The quest never ends; (22) The Helsinki Conference; (23) The abdication of the intellectuals; (24) Tinkering with the old brain; (25) The UN Commission on Narcotic Drugs; (26) For some addicts, some hope; and (27) The Reims Symposium: a biological indictment of marijuana. There are several appendices, including a glossary of cannabis terms, names and compositions of cannabis preparations, and details of some experiments and studies.

660. Schultes, Richard Evans, and Albert Hofmann. **The Botany and Chemistry of Hallucinogens.** With a foreword by Heinrich Klüver. 2nd ed. Rev. and enl. Springfield, IL: Charles C. Thomas, 1980. illus. bibliog. index. (American Lecture Series, Publication No. 1025). \$28.75. LC 78-27883. ISBN 0-398-03863-5.

Recent advances made since the publication of the original work in 1973 have been encompassed in this second edition. The botany and chemistry of this class of plants has progressed rapidly since 1973.

In the new edition, historical material has been strengthened; a more thorough investigation of hallucinogenic plant chemistry has been made, making use of newer improved analytic methods; and more plants have been included having possible or suspected hallucinogenic properties. In addition, a new chapter has been provided that lists plants with alleged hallucinogenic effects. Ethnobotanic, pharmacologic, and psychologic aspects of hallucinogens are covered to some extent, as well as the chemistry, botany, and history of the subject.

Chapter headings are: (1) Hallucinogenic or psychotomimetic agents: what are they?; (2) The botanical distribution of hallucinogens; (3) The structural types of the principal plant hallucinogens; (4) Plants of hallucinogenic use; (5) Plants of possible or suspected hallucinogenic use; and (6) Plants with alleged hallucinogenic effects.

The authors of the book are authorities on the subject. They have provided an extensive bibliography of more than 700 references, and the illustrations are outstanding. Most of the plants discussed are pictured, and views depicting the preparation and use of the drugs are included. Also included are photographs of scientists who have been involved with the development of the field.

The first edition of the book was quite well received.

661. **Statistics on Narcotic Drugs for . . . Furnished by Governments in Accordance with the International Treaties.** Vienna, Austria: International Narcotics Control Board, 1979-. Annual. About \$10.00.

The first section of this publication (in English, French, and Spanish) contains text material on trends in the licit movement of narcotic drugs. It is in two parts: the first on raw materials, their alkaloids, and the derivatives of the alkaloids and the second on synthetic narcotic drugs. Then follow tables containing the principal statistical information. For comparison, statistics for a few previous years have been included.

Tables are headed as follows: (1) Opium production; (2) Manufacture of morphine; (3) Conversion of morphine; (4) Manufacture of the principal narcotic drugs other than morphine; (4a) Manufacture of narcotic drugs other than those specified in Table 4; (5) Coca leaves: utilization for chewing; (6) Manufacture of cocaine; (7) Consumption of the principal narcotic drugs falling under the convention; (7a) Utilization of cocaine, codeine, dihydrocodeine, diphenoxylate, ethylmorphine, morphine and pholcodine in the manufacture of preparations of schedule III of the 1961 convention; (7b) Consumption of narcotic drugs other than those specified in Table 7; (7c) Consumption of narcotic drugs; (8) Total stocks of opium; (9) World trade; and (10) Seizures of narcotic drugs.

The last section indicates maximum levels of opium stocks that countries may hold.

662. U.S. National Institute on Drug Abuse. **Research Issues**. Rockville, MD: National Institute on Drug Abuse, 1974- . Irregular. ISSN 0360-7631.

It has become increasingly important to bring together and make accessible the results of research investigations regarding critical issues in drug use and abuse. This series is intended to aid investigators by collecting, summarizing, and disseminating this body of literature. The focus is on critical problems. Some of the volumes of the series are summaries of research and theoretical studies, and some are original resource handbooks designed to assist drug researchers. Each addresses an area of emerging concern in the research world.

663. U.S. National Institute on Drug Abuse. **Research Monograph Series**. Rockville, MD: National Institute on Drug Abuse, 1975- . Irregular. ISSN 0361-8595.

Prepared by the research divisions of the National Institute on Drug Abuse and published by its Office of Science, the primary objective of this series is to provide critical reviews of research problem areas and techniques. Also published is the content of state-of-the-art conferences, integrative research reviews, and significant original research. Emphasis is on rapid and targeted dissemination of information to the scientific and professional community.



PART III OTHER SOURCES

19 Databases

There are many computerized databases containing material of interest to practicing pharmacists, pharmaceutical scientists, and those in related fields. These fields overlap with a number of other fields, including medicine, chemistry, biology, botany, drug abuse, herbal medicine, law, business, industry, and patents. The databases listed in this section cover these subject areas.

Because computerized databases are a comparatively new phenomenon, the dates covered by them are usually from 1960 on. Rapid changes are taking place in the databases. New ones are being developed, and combinations are being effected, brought about perhaps because of awareness of the overlapping coverage.

A few of the databases provide information directly, but most are bibliographic, providing only references to the literature where information can be found; abstracts are sometimes given as an option. However, online searching has recently been undergoing a shift in focus, with full-text databases appearing. The databases offer access to primary sources through the complete text of articles and books, bypassing the bibliographic stage.

Access to databases is made available to the user through vendors. Following is a list of the addresses of the vendors mentioned in this section.

BRS (Bibliographic Retrieval Services,
Inc.)
1200 Route 7
Latham, NY 12110

DIALOG
3460 Hillview Ave.
Palo Alto, CA 94304

NLM (National Library of Medicine)
8600 Rockville Pike
Bethesda, MD 20209

Orbit/SDC Information Services
2500 Colorado Ave.
Santa Monica, CA 90406

Pergamon-Infoline
1340 Old Chain Bridge Rd.
McLean, VA 22101

Questel, Inc.
1625 I Street, NW
Suite 719
Washington, DC 20006

STN International (Scientific and Technical Information Network)
c/o Chemical Abstracts Service
2540 Olentangy River Rd.
P.O. Box 02228
Columbus, OH 43202

664. ACS DIRECTORY OF GRADUATE RESEARCH. (American Chemical Society).

This database, which is updated every two years, provides information on the academic departments and staff of universities and institutes in the United States and Canada offering graduate degrees in chemistry, biochemistry, chemical engineering, medicinal-pharmaceutical chemistry, clinical chemistry, and polymer science. The print counterpart is the *ACS Directory of Graduate Research*. The vendor is BRS.

665. AMERICAN CHEMICAL SOCIETY PRIMARY JOURNAL DATABASE.

Covering 1980 to the present, this database offers full-text coverage of more than 30,000 articles appearing in 18 primary journals published by the American Chemical Society. Updates appear biweekly. The vendor is BRS.

666. BIOSIS PREVIEWS.

Covering 1969 to the present, this database contains citations from *Biological Abstracts*, *Biological Abstracts/Reports*, *Reviews*, *Meetings*, and *Bioresearch Index*, the major publications of BioSciences Information Service. Together these publications constitute the major English-language service providing comprehensive international coverage of the life sciences. The materials scanned include the following: periodical literature, books, technical reports, published theses, meetings, nomenclatural rules, notes, letters, annual reports, bibliographies, and guides. A search guide is available.

This database is especially useful for retrieving information in the areas of preclinical or experimental medicine, drug development, pharmacognosy, and toxicology. It is available on BRS, DIALOG, and SDC.

667. CA SEARCH. (Chemical Abstracts Service).

Covering 1967 to the present, this database combines the condensed version of *Chemical Abstracts* with controlled vocabulary, CA General Subject Headings, and CAS Registry Numbers each with its modifying phrase. It provides access to what is new and significant in the world's scientific and technical literature for chemistry, chemical engineering, and chemical aspects of the life sciences.

CA SEARCH is a good source of references pertaining to preclinical drug development, toxicology, drug patent literature, synthesis, fermentation, derivation, drug screening, and pharmaceuticals. Vendors are DIALOG, BRS, NLM, and SDC.

668. **CANCEREXPRESS.**

CANCEREXPRESS contains bibliographic records identifying articles covering all aspects of the therapy, etiology, and biology of cancer, as well as studies of mutagenic agents and agents that stimulate cell division. It is a companion file to CANCERLIT (entry 669). The file is a selective current file, containing some 10,000 records from cancer-related articles in several hundred high-quality journals published during the most recent four-month period. The vendor is NLM.

669. **CANCERLIT.**

Formerly called CANCERLINE, this database covers 1963 to the present. It is sponsored by the International Cancer Research Data Bank, a program of the National Cancer Institute. It contains more than 260,000 citations and abstracts of published literature on all aspects of cancer. The vendor is NLM.

670. **CANCERPROJ.**

The CANCERPROJ database contains summaries of ongoing cancer research projects that have been funded during the most recent three fiscal years. The vendor is NLM.

671. **CANOM. (REGISTRY NOMENCLATURE AND STRUCTURE SERVICE).**

Covering 1965 to the present, this database contains data that are based on the CAS Registry Nomenclature and Structure Service, an authority file of names and structural data that have been registered by CAS. Updates are made quarterly or less frequently. The database is produced by the Centre National de l'Information Chimique, and the vendor is Questel.

672. **CAS ONLINE.**

Available on the Scientific and Technical Information Network, STN International, this is a series of files created by Chemical Abstracts Service focusing on chemistry and chemical engineering. The file may be searched by entering keywords (natural language terms used in the literature), CA Subject Index terms (for concepts of all kinds), bibliographic data (authors, titles, CA section numbers, etc.), and CAS Registry Numbers. The database is a single file providing access to more than six million documents abstracts and indexed in *Chemical Abstracts* since 1967. Complete abstracts can be retrieved for all documents cited since mid-1975. A file of material cited prior to 1967 is available; it is called the CAOLD file.

673. **CHEMICAL INDUSTRY NOTES (CIN).** (Chemical Abstracts Service).

Covering 1974 to the present, Predicasts' CIN extracts articles from over 75 worldwide business periodicals that cover the chemical process industries. DIALOG is the vendor.

674. **CHEMICAL REGULATIONS AND GUIDELINES SYSTEMS.**

Containing all regulatory material in effect as of 1 May, 1981, this is an authoritative index to U.S. federal regulatory material relating to the control of chemical substances. It covers federal statutes, promulgated and available federal guidelines, standards, and support documents. It is updated monthly. The vendor is DIALOG.

675. CHEMLINE (The Chemical Dictionary On-Line).

This is an interactive chemical dictionary file created by the Specialized Information Services of the National Library of Medicine in collaboration with Chemical Abstracts Service. It provides a mechanism whereby over one million chemical substance names and corresponding CAS Registry Numbers representing over 500,000 unique substances can be searched and retrieved online. Vendors are DIALOG, BRS, NLM, and SDC.

676. CHEMNAME. (DIALOG Dictionary File).

This database contains a listing of chemical substances in a dictionary-type nonbibliographic file. The primary purpose of the file is to support specific substance searching and substructure searching via nomenclature in the DIALOG Chemical Information System (consisting of CA SEARCH, CHEMNAME, CHEMSEARCH, CHEMSIS, and CHEMZERO, entries 667, 676, 677, 678, and 679). CHEMNAME contains chemical substances in the CAS Registry System that have appeared in two or more document references in CA SEARCH from January 1967 forward.

677. CHEMSEARCH. (DIALOG Dictionary File).

A companion file to CHEMNAME (entry 676), this is a dictionary listing of the most recently cited (the latest six weeks) substances in CA SEARCH (entry 667). The primary purpose of the file is to provide access to chemical substance nomenclature using CAS Registry Numbers for new compounds not yet recorded in other sources. Chemical substances already in CHEMNAME are not duplicated. There are biweekly updates.

678. CHEMSIS. (DIALOG Dictionary File).

CHEMSIS is a companion file to CHEMNAME and CHEMZERO (entries 676 and 679). It is a chemical substance dictionary of Singly Indexed Substances registered through Chemical Abstracts Service. Information provided for each substance listed includes CAS Registry Number, molecular formula, CA substance index names, available synonyms, and ring data. The primary purpose of the file is to support substance searching and various forms of substructure searching in the DIALOG Chemical Information System.

679. CHEMZERO. (DIALOG Dictionary File).

CHEMZERO is a dictionary of chemical substances for which there are no citations in the CA SEARCH (entry 667) files since 1967. It is a companion file to CHEMNAME AND CHEMSIS (entries 676 and 678). Information provided for each substance listed includes CAS Registry Number, molecular formula, CA substance index names, available synonyms, ring data, and other chemical substance information. The primary purpose of the file is to support substance searching in the DIALOG Chemical Information System.

680. CLINPROT.

This is a current file that contains approximately 2000 summaries of clinical investigations of new anticancer agents and treatment modalities. It is updated monthly, and the vendor is NLM.

681. **DARC.**

DARC is a substructure search system, covering 1965 to the present, for the Chemical Abstracts Registry file. It provides access to more than six million substances and is updated with over 28,000 new substances each month. The user must input the structure to be searched using either a graphics terminal cursor or text. The vendor is Questel.

682. **DERWENT WORLD PATENTS INDEX.** (Derwent Publications, Ltd., London).

Covering 1963 to the present, this database contains information on nearly three million inventions represented in more than six million patent documents from 29 patent-issuing authorities around the world. Information on approximately 11,000 new patents is incorporated into the database each week. Pharmaceutical patents are included from 1963 to the present; agricultural chemical patents from 1965 to the present; and polymer and plastics patents from 1966 to the present. Coverage of all chemical patents began in 1970, and coverage of all patents irrespective of subject began in 1974. The vendor for this database is Questel.

683. **DRUG INFORMATION/ALCOHOL USE: ABUSE.**

Covering 1968 to the present, this database contains citations from two different agencies: the Druginfo Service Center of the College of Pharmacy of the University of Minnesota and the Hazelden Foundation. BRS is the vendor for this database.

684. **DRUG INFORMATION FULLTEXT DATABASE.** (American Society of Hospital Pharmacists).

One of the first full-text pharmaceutical databases, this database represents over 50,000 marketed drug products. It contains full-text information from the *American Hospital Formulary Service, Drug Information* (see entry 253) and the latest edition of Trissel's *Handbook of Injectable Drugs* (see entry 353). There are a variety of access points; therapeutic classification numbers, CAS Chemical Registry Numbers, trade names, manufacturers names, and references are all included as part of the database. DIALOG is the vendor.

685. **DRUG PRODUCTS INFORMATION FILE (DPIF).** (American Society of Hospital Pharmacists).

DPIF is a multifunctional database designed to assist hospitals, insurance carriers, state agencies, and health care organizations in implementing and maintaining automated information systems that process drug data. The system includes 40,000 records, describing in standardized terms virtually all commercially available pharmaceutical products. DPIF is said to be flexible enough to be compatible with most hospital systems and can be programmed to meet an institution's specific needs. The user receives a master tape and file documentation. In addition, a bulletin is provided with updated monthly tapes (new additions, changed records, and deletions). Some of the data elements found in DPIF are the National Drug Code, generic name, trade name, dosage form, drug strength, manufacturer or distributor, route of administration, generic code, Drug Enforcement Administration code, American Hospital Formulary Service classification system, unit of use indicator, unit dose indicator, and package size. The database is maintained and marketed by the American Druggist Blue Book Data Center, 875 Mahler Rd., Burlingame, CA 94010.

686. **DRUGDEX.** (Micromedex, Inc., 2750 S. Shoshone St., Englewood, CO 80110; annual subscription rate is \$2075.00).

DRUGDEX is available as a stand-alone database of a computer-generated microfiche drug information system. It is designed to provide specific answers to questions about drug therapy and drug- or patient-related problems. It is intended for all health care professionals who prescribe, order, dispense, or administer medication.

DRUGDEX consists of three major sections, each of which is updated and totally republished every 90 days: (1) Drug evaluations (summarizes data, with references, on dosage, pharmacokinetics, contraindications, precautions, adverse reactions, teratogenic effects, drug interactions, I.V. incompatibilities, clinical application, therapeutic indication, comparative efficacy, and patient instructions); (2) Drug consults (patient-related, referenced consultations answering specific questions regarding disease states, use of drugs, and drug-related problems); and (3) The DRUGDEX index (lists are by generic name, brand name [domestic and foreign], and disease state; secondary access is available by specific topic area such as dosage, pharmacokinetics, cautions, evaluations, clinical applications, etc.).

687. **EMBASE.** (Excerpta Medica).

From 1974 to the present nearly every aspect of human medicine, including topics in the basic biologic sciences with some relevance to human medicine, is covered in this bibliographic database. An outstanding feature is its unusually complete coverage of articles on drugs and potential drugs. It is updated biweekly. The print counterparts are the Excerpta Medica abstract journals, but everything is combined in the database rather than treated in sections as is the case with the printed indices. Over 4000 biomedical journals are covered from 110 countries. Over half of the non-English papers cited include abstracts. There is a turnaround time of two to ten weeks from receipt of the journal. A variety of user aids are available.

EMBASE is said to overlap only somewhat with MEDLINE (entry 695); it provides access to a large body of specialized literature on drugs, toxicity, environmental health, forensic science, and basic sciences not covered by MEDLINE. The vendors are BRS and DIALOG.

688. **FINE CHEMICALS DIRECTORY.**

This database is a comprehensive, easy to use, automated catalog of commercially available research chemicals including organics, inorganics, biochemicals, dyes, and stains. This unique database contains catalog entries from many suppliers. The catalogs indexed vary from those of major companies, supplying thousands of different compounds, to others with a more selective range of specialized classes of compounds. Pergamon-Infoline is the vendor.

689. **GPO (GOVERNMENT PRINTING OFFICE) MONTHLY CATALOG.**

Covering 1976 to the present, this database is the machine-readable equivalent of the printed *Monthly Catalog of the United States Government Publications*. It is updated monthly. Vendors are DIALOG and BRS.

690. **GPO PUBLICATIONS REFERENCE FILE.**

Covering 1971 to the present, this file indexes public documents currently for sale by the Superintendent of Documents, U.S. Government Printing Office, as well as forthcoming and recently out-of-print publications. DIALOG is the vendor.

691. **INDEX CHEMICUS ONLINE.** (Institute for Scientific Information).

Covering 1962 to the present, this is the online version of ISI's print publications, *Current Abstracts of Chemistry* and *Index Chemicus*. It contains citations to articles in which new organic compounds have been reported from about 100 journals. It is in English with international coverage. There are monthly updates. Questel is the vendor.

692. **INTERNATIONAL PHARMACEUTICAL ABSTRACTS (IPA).** (American Society of Hospital Pharmacists).

Covering 1970 to the present, this database provides information on all phases of the development and use of drugs and on pharmaceutical practice. Its print counterpart bears the same name (see entry 42). It covers about 700 journals, many of which are not indexed by other online databases. A unique feature of the abstracts that report clinical studies is the inclusion of study design, number of patients, dosage forms, and dosage schedules. CAS Registry Numbers for all drugs or chemicals are given, and user aids are available. Vendors are DIALOG, BRS, SDC, and NLM (in part).

693. **IRCS MEDICAL SCIENCE DATABASE.**

This database is composed of the full text of 32 English-language journals covering the entire field of medical and biomedical science. It contains all articles published in the IRCS Medical Science program since January 1982. The vendor is BRS.

694. **MARTINDALE ONLINE.** (Pharmaceutical Society of Great Britain).

This is a compilation of evaluated information on most drugs used in therapeutics throughout the world. Much of the information is the same as that used to produce *Martindale: The Extra Pharmacopoeia* (see entry 105). The database contains information on more than 5000 compounds used in many thousands of preparations. Included are many investigational drugs, ancillary substances such as diagnostic agents, insecticides, coloring agents, preservatives, and noxious substances. Information is provided on groups of compounds as well as on individual substances, and it is supported by selected abstracts. For each compound there is usually information on nomenclature, adverse effects and their treatment, precautions, contraindications, interactions, pharmacokinetics, actions, uses, dosage, administration, and preparations.

The database is updated every six months, and a users' guide and a thesaurus are available. The vendors are Data-Star and BRS.

695. **MEDLINE (Medlars Online).**

This pioneer database, produced by the U.S. National Library of Medicine, covers 1966 to the present. MEDLINE corresponds to the three printed indexes, *Index Medicus*, *Index to Dental Literature*, and *International Nursing Index*. Additional materials not published in *Index Medicus* are included in the database in the areas of communication disorders, population, and reproductive biology. Vendors are DIALOG, BRS, and NLM.

696. **NTIS (National Technical Information Service).**

This file, with coverage from 1964 to the present, is produced by the National Technical Information Service of the U.S. Department of Commerce. The database consists of government-sponsored research, development, and engineering reports, as well as other analyses prepared by government agencies, their contractors, or grantees.

An increasing proportion of the database consists of unpublished materials originating from outside the United States. Vendors are DIALOG, BRS, SDC, and NLM.

697. **PAUL DE HAEN DRUG INFORMATION SYSTEMS.** (Micromedex, Inc., 2750 S. Shosone St., Englewood, CO 80110).

The De Haen System is made up of a group of computer-generated microfiche and print products providing information on new drugs. Magnetic tapes are available for the years 1980-1985 for some of the products. The products include *Drugs in Prospect*, *Drugs in Research*, *Drugs in Use*, *Adverse Drug Reactions and Interactions System*, *New Product Group* and *Nonproprietary Name Index* (entries 276, 277, 278, and 322).

The system provides structured abstracts from the world's biomedical literature with bibliographic citation and pharmacologic data such as activity, dosage, results, and toxicity. Also provided are CAS Registry Numbers, chemical structure data, and other information to assist in compound identification.

De Haen's intention is to go online with the existing drug information systems late in 1985.

698. **PHARMACEUTICAL LITERATURE DOCUMENTATION (RINGDOC).** (Derwent Publications, Ltd., London).

This is a comprehensive information service, directed to industry, covering relevant papers found in the world's scientific pharmaceutical journals. RINGDOC products include abstracts, abstract summaries, indices, magnetic tapes, microfilm, and microfiche. The information is also accessible online using controlled keywords and codes. SDC is the vendor.

699. **PHARMACEUTICAL NEWS INDEX (PNI).** (Data Courier, Inc.)

Covering 1975 to the present, this database is the only one that provides access to pharmaceutical, cosmetics, and medical device industry newsletters. It corresponds to the printed publication of the same name (see entry 48). The database has been broadened in coverage recently in such areas as international veterinary pharmaceuticals, genetic engineering, biomedicine, and the cosmetic industry with the coverage of additional publications. Vendors are BRS and DIALOG.

700. **PRE-MED AND PRE-PSYCH.** (Medical and Psychological Previews).

This database replaces the PRE-MED and PRE-PSYCH databases for access to current literature of clinical medicine and psychology. It covers about 160 core journals within ten days of their receipt in libraries. In addition to core medical and psychologic journals, key titles in psychiatry, nursing, and hospital administration are also covered. It is a current awareness file; new documents are added weekly and older ones removed after three months. The vendor is BRS.

701. **RTECS (Registry of Toxic Effects of Chemical Substances).**

This file is the National Library of Medicine's online version of the National Institute for Occupational Safety and Health annual compilation of substances with toxic action. The printed version also has the title *Registry of Toxic Effects of Chemical Substances* (entry 611). The original collection of data that makes up RTECS was known as the Toxic Substances List. The vendor is NLM.

702. **SCISEARCH.** (Institute for Scientific Information).

This is a multidisciplinary international index to the literature of science and technology covering 1974 to the present. A backfile covering 1965-1973 is also available. The vendors are BRS and DIALOG.

703. **SUPERINDEX.** This database consists of back-of-the-book indices of selected reference volumes of more than 20 major publishers in science, engineering, and medicine. There are several million entries, which comprise a vast interdisciplinary database providing access to approximately 100,000 pages of scientific and technical information. The vendor is BRS.

704. **TDB (Toxicology Data Base).**

This is a factual current file of chemical and pharmacologic/toxicologic information, data that have been extracted from textbooks, handbooks, criteria documents, and monographs. The material in TDB has been reviewed by a peer group of scientists and includes information on nomenclature, threshold limit values, environment, manufacture, and chemical and physical constants. The vendor is NLM.

705. **TOXLINE (Toxicology Information On-Line).**

This is a major file for bibliographic information on toxic substances covering 1965 to date. It contains references (primarily from periodical literature) to human and animal toxicity studies, effects of environmental chemicals and pollutants, adverse drug reactions, and analytic methodology. The vendor is NLM.

20 Periodicals

Listed in this section are periodicals covering a wide range of topics in the fields of pharmacy practice, the pharmaceutical sciences, toxicology, and cosmetics. There are professional periodicals for the practicing pharmacist and a large number of journals for the scientist. There are a number of newsletters. Also included are titles of value to those interested in regulatory and legal aspects of the fields and some for executives in the industry. Some cover drug and alcohol abuse. There are two titles concerned with the history of pharmacy, *Pharmacy in History* (entry 908) and *Revue d'Histoire de la Pharmacie* (entry 931). One title is especially for pharmacy school educators, the *American Journal of Pharmaceutical Education* (entry 723).

Abstracting and indexing journals have for the most part been listed in part 1, chapter 2, and annuals and reviews are listed in part 1, chapter 3. State pharmaceutical association publications have been excluded (although virtually all states have them), as have newsletters of schools of pharmacy. All of the periodicals listed are currently being published, but their former titles are mentioned in the annotations if they are known.

When there are separate rates for institutional and individual subscriptions, the amount listed is the institutional rate. Institutional rates are usually much higher than the individual ones. In both cases price information becomes obsolete very rapidly.

No attempt has been made to make this periodical listing complete. It includes what are presumed to be the most used and valuable current titles only. Most of the publications are in English, even some that are published in countries where other languages predominate. In addition, the recent trend has been for the international scientific journals to request that articles be submitted in English.

706. **AJP: The Australian Journal of Pharmacy.** West Melbourne, Australia: Australasian Pharmaceutical Publishing Co., 1886- . Monthly. About \$35.00 per year. ISSN 0705-8454.

Formerly given other titles such as *Australasian Journal of Pharmacy* and *Australian Journal of Pharmacy* (without the initials), this publication is the official journal of the Associated Pharmaceutical Organizations of Australia. It is intended primarily for practicing pharmacists. Included are perhaps one or two feature articles, many short features and items, news (including marketing information), current drug information, letters, conference reports, and advertisements.

707. **About Your Medicines.** Rockville, MD: U.S. Pharmaceutical Convention, 1981- . Bimonthly. \$12.00.

This newsletter is subtitled "News for Consumers About Medicines and Their Use." It contains updates to information published in the *USP Dispensing Information, Volume II, Advice for the Patient* (see entry 358). The newsletter provides news and health care information to help the consumer use medicines safely and effectively. There is a section on new drug products. Some of the subjects covered include self-medication, adverse drug reactions, vitamins and nutrition, DMSO, health quackery, aspirin, Reye's syndrome, drug and drug-food interactions, diet pills, flu shots, drug tampering, poison prevention and treatment, medicines of the future, arthritis, and heart disease.

708. **Acta Pharmaceutica Sueica.** Stockholm, Sweden: Swedish Academy of Pharmaceutical Sciences, 1964- . Six times per year. ISSN 0001-6675.

The scientific edition of *Svensk Farmaceutisk Tidskrift*, this journal publishes papers in English, either as regular articles or as short communications. Reviews are not published. An abstract precedes each article. A few supplements have been issued.

709. **Acta Pharmaceutica Technologica.** (Informationsdienst A.P.V.). Stuttgart, West Germany: Deutscher Apotheker-Verlag, 1955- . Quarterly. ISSN 0340-3157.

Sponsored by the Arbeitsgemeinschaft für Pharmazeutische Verfahrenstechnik (A.P.V.) e. V. Mainz, this journal is devoted chiefly to problems in pharmaceutical chemistry and related areas of scientific, technical, and practical pharmacy. It gives special attention to biopharmacy and quality control. Original contributions and survey articles by authorities in pharmaceutical research, industry, and at universities are published in German, English, or French. They are preceded by German and English abstracts. Supplementary volumes appear at irregular intervals. They contain special articles and reports of congresses and scientific meetings too long to print in the regular issues.

710. **Acta Pharmacologica et Toxicologica.** Copenhagen, Denmark: Munksgaard International Publishers, 1945- . Ten times per year. \$115.00. ISSN 0001-6683.

This prominent international journal publishes papers on experimental pharmacology by Scandinavian authors or by foreign scientists working in Scandinavian laboratories. This limitation, however, does not apply to articles concerning experimental and clinical toxicology. The text is in English. A great many supplements are published, which are included in the subscription price. Many of these are proceedings of scientific meetings.

711. **Actualités Pharmacologiques.** Paris, France: Masson, 1949- . Annual. ISSN 0567-8854.

Founded by R. Hazard, this annual publication in the French language presents about eight to ten scientific articles each year. Contents pages translated into English are included.

712. **Advances in Alcohol and Substance Abuse.** New York: Haworth Press, 1981- . Quarterly. \$42.00 to individuals; \$73.00 to libraries. ISSN 0270-3106.

This journal is intended for those working in the field of alcohol and substance abuse. One of its major goals is to provide health professionals with a basic foundation of the biologic principles pertaining to substance abuse as these principles relate to the clinical setting. Each issue has a special theme, and, where appropriate, basic research is included as well as clinical studies.

Recent issues have dealt with the following topics: current controversies in alcoholism; dual addiction; cultural and sociologic aspects of alcoholism and substance abuse; recent advances in the biology of alcoholism; and the addictive behaviors. Each issue contains a "Selective Guide to Current Reference Sources on Topics Discussed in This Issue." The issues are also available as separate publications in hard covers.

713. **Adverse Drug Reaction Bulletin.** Edited and published by D. M. Davies, Adverse Drug Reaction Unit, Shotley Bridge General Hospital, Consett County, Druham DH8 ONB, England, 1966- . Bimonthly. \$7.00. ISSN 0044-6394.

This newsletter is also published in Italian, French, and Spanish. Each issue is made up of about four pages of short items about various drug reactions. Each issue usually is devoted to a specific type of drug. A large number of literature references are provided.

714. **Adverse Drug Reactions and Acute Poisoning Reviews.** Oxford, England: Oxford University Press, 1982- . Quarterly. \$75.00. ISSN 0260-647-X.

The goal of this publication is to provide a single source of information on adverse drug reactions and acute poisonings by bringing together case reports and articles on these subjects that are published in a wide range of medical literature. The articles present critical and exhaustive reviews of current knowledge and new developments. The journal is intended primarily to keep the physician abreast of the extensive and scattered literature. Each issue contains three or four reviews by recognized authorities with many literature references included. Book reviews appear in each issue.

715. **Aerosol Age: The International Authority in Spray Packaging.** Cedar Grove, NJ: Industry Publications, 1956- . Monthly. \$14.00. ISSN 0001-9291.

Intended for firms either now manufacturing and/or marketing aerosols or considering doing so, this periodical contains several featured articles and departments such as industry news, Washington news, new products, meeting announcements, and information about new equipment and supplies. There are many advertisements in color. Each year a buyers' guide is published. Among the products involved are pressure-packed cosmetics, chemical specialties, pharmaceuticals, paints, automotive products, and foods.

716. **Agents and Actions.** Basel, Switzerland: Birkhäuser Verlag, 1969- . Six times per year. \$120.00. ISSN 0065-4299.

This is the official journal of the European Workshop on Inflammation and the European Histamine Research Society. It publishes reports and survey articles dealing with the action of drugs, transmitters, inhibitors, and so forth from the following fields of pharmacologic research: histamine and kinins, immunosuppression and inflammation, regulation of respiration, models in toxicology, and platelets and thrombosis. Articles are also published in other fields of pharmacology provided they contain stimulating experimental approaches or interpretations. The articles are written in a more readable style than is ordinarily the custom in technical papers. Each issue contains a large number (25-50) of short papers. Some have been presented at workshops and other meetings.

Accompanying the journal is a supplementary book series providing for the rapid publication of the proceedings of symposia on topics of current interest in inflammation, allergy, and thrombosis.

717. Alcohol and Alcoholism: International Journal of the Medical Council on Alcoholism. Oxford, England: Pergamon Press, Volume 13, 1978- . Quarterly \$75.00.

Formerly called *British Journal on Alcohol and Alcoholism*, this publication publishes original research and review articles on various aspects of alcohol and alcoholism, including biochemical, neurochemical, nutritional, pharmacologic, behavioral, and clinical medical aspects. It also includes correspondence and summaries of international conferences.

718. Alcohol Health and Research World. Rockville, MD: U.S. National Institute on Alcohol Abuse and Alcoholism, 1973- . Quarterly. \$11.00.

This periodical was originally an experimental publication, but beginning with the fall 1976 issue it has been an approved federal periodical. It features survey articles and in-depth reports on all aspects of research, prevention, treatment, and rehabilitation of alcohol abuse and alcoholism. Articles from allied fields are included when they are significant. Book reviews and bibliographies are included. The articles are of high quality, suitable for those engaged in research, treatment, or prevention work in the field.

719. Alcoholism: Clinical and Experimental Research. Baltimore, MD: Williams & Wilkins, 1977- . Bimonthly. \$70.00. ISSN 0145-6008.

This is the official journal of the American Medical Society on Alcoholism and the Research Society on Alcoholism. It publishes original refereed papers in three areas: (1) Basic science, including biochemistry, experimental neurology and psychology, and physiology; (2) Clinical research, including epidemiology and studies with human subjects; and (3) Treatment methods, including description, analysis, and results. Also included are editorials, state-of-the-art reviews, and book reviews. In addition, items of interest to members of the societies are published such as announcements of meetings, programs, abstracts of papers, and news.

720. American Druggist. Volume 13- . New York: Hearst Corporation, 1884- . Monthly. \$24.00 per year. ISSN 0190-5279.

The first 12 volumes of this periodical were called *New Remedies*, and there have been slight variations in its title since the current name was adopted. The publication is intended for the practicing pharmacist, particularly those who work in mass merchandising outlets such as chain drugstores, independent drugstores, and discount

stores. Of recent years the October issue of the publication has published a leading article on generic drugs which reports on an annual study that shows what products pharmacists dispense when the choice is up to them. Long-term trends in dispensing can be seen. There are special features from time to time such as the inclusion of a special liftout section on pharmacy management.

721. **American Journal of Drug and Alcohol Abuse.** New York: Marcel Dekker, 1974- . Four times per year. \$105.00.

This journal takes a medically oriented, comprehensive view of the field. Articles dealing with preclinical and clinical facets of the problem and also social modalities are included in the scope of the publication. Such subjects as drug abuse trends, pharmacology of abused drugs and drugs used in treatment, cultural attitudes, treatment methods, funding sources, criminal laws, community approaches, and self-help techniques are all covered. The journal is intended to appeal to all workers in the field.

722. **American Journal of Hospital Pharmacy.** Bethesda, MD: American Society of Hospital Pharmacists, Volume 15, 1958- . Monthly. \$60.00. ISSN 002-9289.

The official publication of the American Society of Hospital Pharmacists, this journal was formerly called the *Bulletin of the American Society of Hospital Pharmacists*. The journal is highly regarded and shows a high readership pattern. It covers all facets of drug use control in hospitals and other organized health care settings, particularly as related to the functions and responsibilities of pharmacists. It is the leading publication in this area of the field.

Some of the topics covered include: quality assurance, prospective payment and DRGs, pharmacy and therapeutics committees, formulary systems, patient drug education, computer applications, ambulatory care pharmaceutical services, drug purchasing and inventory control, and drug information services. The following features are included: news, questions and answers, law notes, current literature, editorials, equipment and supplies, reports of the society, and management consultation. In addition, the journal offers selected articles for continuing education credits.

723. **American Journal of Pharmaceutical Education.** Bethesda, MD: American Association of Colleges of Pharmacy, 1937- . Quarterly. \$35.00. ISSN 0002-9459.

The official publication of the American Association of Colleges of Pharmacy, this journal publishes the proceedings of the Association, formerly issued separately.

Each issue usually contains four or five long articles related to pharmaceutical education, about ten shorter articles under "Notes," reports, statistics and other information about pharmacy schools, an editor's section, a president's section, announcements, comprehensive book reviews, and announcements of other recent publications such as new journals.

724. **American Journal of Pharmacy and the Sciences Supporting Public Health.** Philadelphia, PA: Philadelphia College of Pharmacy and Science, 1825- . Quarterly. \$17.50. ISSN 0730-7780.

Beginning in 1985 this periodical will no longer be published in the familiar format. The intent is to publish a single annual issue of selected manuscripts, solicited by

invitation only. These manuscripts will represent primarily papers presented at the symposium held annually at the Philadelphia College of Pharmacy and Science.

For many years the publication has been small, each issue containing about three articles and a section of book reviews and other notices of printed communications.

The publication is said to be the earliest pharmaceutical journal published in the United States; however, the title has varied somewhat.

725. **American Pharmacy.** Washington, DC: American Pharmaceutical Association, Volume 18, 1978-. Monthly. \$40.00. ISSN 0160-3450.

This publication has had a long and complicated history. A forerunner of it was called the *Journal of the American Pharmaceutical Association*, and it began in 1912. From 1940 to 1960 the journal was issued in two parts, one the *Journal of the American Pharmaceutical Association, Scientific Edition*, and this one, the *Journal of the American Pharmaceutical Association, Practical Pharmacy Edition*.

Each issue of *American Pharmacy* usually contains four or five featured articles, news and comments, special sections, a management section, and departments such as book reviews, meeting notices, letters, news about the association, and so forth. The journal is especially suitable for the practicing pharmacist.

726. **Anesthesia and Analgesia: Journal of the International Anesthesia Research Society.** Cleveland, OH: Published for the Society by Elsevier Science Publishing Co., 1922-. Monthly. \$85.00. ISSN 0003-2999.

Each issue of this journal, formerly called *Current Researches in Anesthesia and Analgesia*, usually contains several (about ten) scientific articles, as well as clinical reports, letters to the editor, technical communications, and book reviews.

727. **Annales Pharmaceutiques Françaises.** Paris, France: Masson, 1943-. Six times per year. \$118.00. ISSN 0003-4509.

An organ of the Académie Nationale de Pharmacie, this journal provides in each issue about ten original research articles. Comprehensive review articles are occasionally also published. Although in the French language, the journal includes summaries of articles and contents pages in English.

728. **Annals of Internal Medicine.** Philadelphia, PA: American College of Physicians, 1922-. Monthly. \$45.00. ISSN 0003-4819.

This is a medical journal rather than a pharmaceutical one, but it contains a great deal about drugs and therapy. It is of interest to clinical pharmacists. The journal publishes original articles, case reports, reviews, editorials, book reviews, letters, and medical notices for internal medicine and related fields. The articles cover such areas as newly delineated syndromes and diseases; new investigation into mechanisms of disease; descriptions of clinical experience; reports of research or drug trials; and other original contributions to etiology, pathology, epidemiology, diagnosis, or treatment. Adverse drug effects are reported in brief reports.

729. **Antibiotiki.** Moscow, USSR: Izdatel'stvo Meditsina, Petrovergskii, 1956-. Monthly. \$21.00. ISSN 0003-5637.

The articles in this journal are in Russian, but there are summaries and tables of contents in English. Each issue usually contains seven or eight articles, some guidelines for practitioners, a review of literature, and book reviews.

730. **Anti-Cancer Drug Design.** New York: Macmillan Press, Ltd., Scientific and Medical, 1985- . Quarterly. \$95.00. ISSN 0266-9536.

This new journal combines basic scientific principles with knowledge of drug metabolism, disposition, and pharmacokinetics. It publishes original research papers, short communications, reviews, and correspondence.

731. **Antimicrobial Agents and Chemotherapy.** Washington, DC: Society of Microbiology, 1972- . Monthly. \$157.00. ISSN 0066-4804.

This interdisciplinary publication is devoted to the dissemination of knowledge relating to all aspects of antimicrobial, antiparasitic, and anticancer agents and chemotherapy. Each issue contains about 35 articles, which are listed in the contents pages under broad headings such as chemistry-biosynthesis, mechanism of action, mechanisms of resistance, susceptibility, analytical procedures, experimental therapeutics, clinical therapeutics, and pharmacology. Brief summaries of developments in fast-moving areas of chemotherapy are also published.

732. **Antimicrobic Newsletter.** New York: Elsevier Science Publishing, 1984- . Monthly. \$48.00. ISSN 0738-1751.

Intended to assist clinical and laboratory practitioners, drug development scientists, and other professionals working with antimicrobials, this newsletter monitors the major regulatory agencies and committees whose decisions and findings are of concern. It provides timely information on changes and anticipated changes in regulatory standards and guidelines. There are original articles and reports on new drugs, regulatory affairs and standards, in vitro diagnostics, meeting reports, and commentaries on recent literature.

733. **The Apothecary: The Business Journal for Pharmacy.** Los Altos, CA: Health Care Marketing Services (P.O. Box AP, Los Altos, CA 94022) in affiliation with the Massachusetts College of Pharmacy, 1888- . Six times per year. \$18.00 (free to qualified personnel). ISSN 0003-6560.

The title of this journal has varied, especially during the early years of its existence. It is a small but attractive publication, with color illustrations used with articles and in ads. There are about three articles per issue that cover business and management topics.

734. **Archiv der Pharmazie.** Weinheim, West Germany: Verlag Chemie GmbH, 1822- . Monthly. \$230.00. ISSN 0365-6233.

"Herausgegeben von der Deutschen Pharmazeutischen Gesellschaft mit Unterstützung der Bundesvereinigung Deutscher Apothekerverbände—ABDA durch," this periodical is in German with an article occasionally printed in English. All articles have English summaries. The chemical, biologic, and technical aspects of drug research are covered.

Each issue usually contains 10-12 articles, a few short communications, and book reviews.

735. **Archiv for Pharmaci og Chemi.** Scientific edition. Copenhagen, Denmark: Danmarks Apothekerforening (The Association of Danish Pharmacy Proprietors) and Danmarks Farmaceutiske Selkab (The Pharmaceutical Society of Denmark), 1973- . Quarterly. Kr. 225. ISSN 0302-248X.

Most of the articles in this journal are in English, but French and German papers are also accepted. Each issue contains four or five scientific articles with summaries.

736. **Archives Internationales de Pharmacodynamie et de Therapie.** Ghent, Belgium: Heymans Institute of Pharmacology, 1894- . Monthly. \$200.00. ISSN 0003-9780.

The title of this publication has varied since its inception. It formerly published articles in Dutch, German, or French, but recently virtually all articles are in English. Included are papers in the field of experimental and clinical pharmacology, about 12-15 per issue, and several book reviews.

737. **Archives of Toxicology.** Berlin, Germany: Springer-Verlag, Volume 32, 1974- . Eight times per year. \$284.00. ISSN 0340-5761.

Formerly this publication was called *Archiv für Toxicologie* and also *Fühner-Wielands Sammlungs von Vergiftungsfällen*. It is edited on behalf of the Deutsche Pharmakologische Gesellschaft and the Deutsche Gesellschaft für Rechtsmedizin and is the official organ of the European Society of Toxicology. The journal publishes original papers, reviews, short communications, and letters on all aspects of toxicology. Special attention is given to studies on mechanisms of toxicology, new methods of treatment and analysis, experimental studies of chemicals in the environment, and forensic toxicology. English articles are preferred.

738. **Arzneimittel-Forschung. Drug Research.** Aulendorf, West Germany: Edition Cantor, 1951- . Monthly. DM 380. ISSN 0004-4172.

The text of this scientific journal is in English or German. Each issue contains about 20 articles, book reviews, and a keyword index. Meeting proceedings are sometimes published.

739. Association of Food and Drug Officials of the United States. **Quarterly Bulletin.** Topeka, KS: Editorials Committee of the Association of Food and Drug Officials of the United States, 1937- . Quarterly.

This bulletin publishes papers presented at meetings of the Association, such as the Annual Conference, and sectional and local conferences of Food and Drug Officials. Complete proceedings of the meetings of the National Association, abstracts of meetings of sectional and local organizations, and news items related to food and drug control appear from time to time. Most of the material published concerns food rather than drugs.

740. **Australian Journal of Hospital Pharmacy.** Abbotsford, Victoria, Australia: Society of Hospital Pharmacists of Australia, 1966- . Quarterly. \$24.00. ISSN 0310-6810.

An official journal of the Society of Hospital Pharmacists of Australia, this publication contains articles (five or six per issue), editorials, a question-and-answer section, book reviews, and letters to the editor.

741. **Biochemical Pharmacology.** Oxford, England: Pergamon Press, 1958- . 24 times per year. \$900.00. ISSN 0006-2952.

Devoted to research into the development of biologically active substances and their mode of action at the biochemical and subcellular level, this journal provides a

forum for rapid publication of original research papers, short and preliminary communications, and invited commentaries. Included in each issue are 30-35 articles on all phases of pure and applied cellular and molecular pharmacology, including organochemical, physiochemical, biochemical, and cytologic research.

742. Biopharmaceutics and Drug Disposition. New York: John Wiley & Sons, 1979- . Quarterly. \$130.00. ISSN 0142-2782.

This journal publishes original reports of studies in biopharmaceutics, drug disposition, and pharmacokinetics, especially those that have a direct relation to the therapeutic use of drugs. This includes pharmacologic studies and therapeutic response and toxicity related to plasma and tissue concentrations of drugs and their metabolites. In addition, papers are published on factors affecting the disposition of and clinical response to drugs and the design of drug dosage regimens and the treatment of overdose based on pharmacokinetic principles.

Each issue usually contains about ten research articles, some short communications, and book reviews. Review articles are occasionally published.

743. Bollettino Chimico Farmaceutico. Milan, Italy: Società Editoriale Farmaceutica, Volume 33, 1892- . Monthly. \$50.00. ISSN 0006-6648.

Formerly called *Bollettino Farmaceutico*, the articles of this journal are published in Italian, but there are summaries in English as well as Italian. Each issue includes several articles and abstracts of current literature.

744. British Journal of Addiction. Edinburgh, Scotland: Churchill Livingstone, 1903- . Quarterly. ISSN 0007-0890.

This research journal has had a long history. It is sponsored by the Society for the Study of Addiction, an organization founded in 1884, which at that time was called the Society for the Study and Cure of Inebriety. It is an important periodical that has provided a forum for the exchange of information on an international basis for many years. It publishes articles on the results of research, much of it from young British workers; it is multidisciplinary and international in approach; it covers remote areas of the world; and it publishes material on all sides of controversial issues. Noted authorities have served as editors.

745. British Journal of Clinical Pharmacology. Oxford, England: Blackwell Scientific Publications, for the British Pharmacological Society, 1974- . Monthly. \$250.00. ISSN 0306-5251.

A leading publication of the field, this journal contains papers and short reports on all aspects of drug action in man (including chemotherapy), invited review articles, and correspondence. Each issue contains about 12-18 papers, preceded by summaries. Proceedings of the Clinical Section of the British Pharmacological Society are published in abstract form, and supplements containing information on new methods, new drugs, and new approaches to treatment are included with the subscription.

The journal is said to bridge the gap between the medical profession, clinical research, and the pharmaceutical industry.

746. **British Journal of Pharmacology.** Basingstoke, Hampshire, England: Macmillan Press, Scientific and Medical Division, 1946- . Monthly. \$390.00. ISSN 0007-1188.

Formerly called the *British Journal of Pharmacology and Chemotherapy*, this publication is "edited for the British Pharmacological Society," and publishes its proceedings along with other papers. Articles are included on all aspects of pharmacology, including chemotherapy. Each issue usually contains 25-30 scientific papers plus some short communications.

747. **Bulletin on Narcotics.** United Nations, Division of Narcotic Drugs, 1949- . Quarterly. \$20.00.

This international journal is published in English and French. Selected articles are subsequently published in Spanish and Russian, and a summary of each volume is issued in Chinese every year. The publication covers all aspects of drug control, the work of international groups responsible in this field, and developments in treatment, rehabilitation, and social reintegration of addicts. Some scientific articles that describe original research are published.

748. **CRC Critical Reviews in Therapeutic Drug Carrier Systems.** Boca Raton, FL: CRC Press, 1984- . Quarterly. \$104.00.

This new review journal provides critical evaluations of the newest concepts, methods, and data embracing a wide range of areas in research, production, and clinical practice involving therapeutic drug carrier systems. Many fields utilize these systems, including cancer, diabetes mellitus, rheumatoid arthritis, cardiovascular disorders, sickle cell anemia, drug addiction, allergies, chronic pain, and fertility control.

Each article published averages about 35 pages in length, and every issue carries two to four articles.

749. **CRC Critical Reviews in Toxicology.** Boca Raton, FL: CRC Press, 1971- . Quarterly. \$104.00. ISSN 0045-6446.

A review publication, this journal provides analyses of important topics in toxicology. It makes available critical assessments of subjects that are part of the advancing frontiers of toxicology and related scientific disciplines. It is important to those in the immediate area of toxicology, those in government regulatory agencies concerned with foods, drugs, agriculture, and environmental chemicals, and those in agriculture, industry, and the academic world. Each issue contains three or four scientific articles with abstracts provided.

750. **CTFA Cosmetic Journal.** Washington, DC: Cosmetic, Toiletry and Fragrance Association, 1969- . Quarterly. \$16.00. ISSN 0090-0591.

Formerly called the *TGA Cosmetic Journal*, this publication includes a few articles but mostly news, particularly of the Association. Included are editorials, industry news, meeting notices, and news from Washington. The Cosmetic, Toiletry and Fragrance Association is the leading trade association of the cosmetic industry.

751. **Canadian Journal of Hospital Pharmacy.** Toronto, Ontario, Canada: Canadian Society of Hospital Pharmacists, Volume 21, 1969- . Quarterly. \$21.00. ISSN 0008-4123.

This publication continues *Hospital Pharmacist*, which ceased publication with Volume 20. Intended mainly for those in institutional pharmacy settings and members of the Society, each issue contains three or four articles, editorials, letters to the editor, a President's Page, book reviews, information about the Society, meeting notices, and drug information notes.

752. Canadian Journal of Physiology and Pharmacology: Journal Canadien de Physiologie et Pharmacologie. Ottawa, Ontario, Canada: National Research Council of Canada, Volume 42, 1964- . Monthly. \$113.00. ISSN 0008-4212.

This journal, which includes some text in French, is affiliated with the Canadian Physiological Society, the Pharmacological Society of Canada, the Canadian Society for Nutritional Sciences, and The Society of Toxicology of Canada. It publishes reports of original research on all aspects of physiology, pharmacology, toxicology, and nutrition. Four categories of papers are published: complete definitive studies, notes (small-scope projects), communications (rapid preliminary publications of particularly novel and significant findings), and reviews. Each issue contains about 13-15 articles.

753. Canadian Pharmaceutical Journal. Ottawa, Ontario, Canada: Canadian Pharmaceutical Association, 1968- . Monthly. \$35.00. ISSN 0008-4743.

Said to be dedicated to the continuing education and improvement of all practicing pharmacists and to the development of all fields of pharmacy practice in Canada, this journal publishes articles in French or English, but most material is in English. Published are articles on clinical research and academic, philosophical, political, historical, or business topics of direct relevance to practicing pharmacists.

The journal formerly contained a specific scientific section that was superseded by the *Canadian Journal of Pharmaceutical Sciences* with the May 1966 issue. It ceased publication in 1981.

754. Cancer Chemotherapy and Pharmacology. Berlin, Germany: Springer-Verlag, 1978- . Six times per year. \$196.00. ISSN 0344-5704.

This English-language journal publishes papers on both experimental and clinical research concerning cancer chemotherapy and pharmacology. The material published appears under these headings: editorials, general reviews, original articles, short communications, and letters to the editors. There are usually 16-18 original papers per issue.

755. Cancer Drug Delivery. New York: Mary Ann Liebert, 1983- . Quarterly. \$110.00. ISSN 0732-9482.

Innovations and advances in science that have emerged of recent years have led to the development of more sophisticated and effective drug-delivery systems for cancer treatment. This journal reports on new and innovative methods of delivery of cancer therapeutic agents that will improve efficacy, decrease toxicity, or improve the convenience of the therapy. Predictive models are also included. The journal is designed to provide a forum for communication both for clinical investigation and basic research.

756. **Chemical and Pharmaceutical Bulletin.** Tokyo, Japan: Pharmaceutical Society of Japan, 1953-. Monthly. \$70.00. ISSN 0009-2363.

This English-language journal formerly was called *Pharmaceutical Bulletin*. It publishes three types of material: original research articles, notes, and communications to the editor. Each issue contains 50-60 articles listed under these headings in the contents pages: inorganic, organic, medicinal chemistry, pharmacognosy, analytical, biological, pharmaceutical, pharmacological, and environmental. Communications to the editor are a separate grouping at the end.

757. **Chemico-Biological Interactions: Molecular Mechanisms by which Exogenous Chemicals Effect Changes in Biological Systems.** New York: Elsevier Science Publishers, 1969-. Monthly. \$541.00. ISSN 0009-2797.

This publication contains three types of articles: papers reporting results of original fundamental research, review articles, and short communications of work in progress that may be important to other workers of the field. Each issue contains about ten original articles.

758. **Chemist and Druggist.** Tonbridge, Kent, England: Benn Publications, 1858-. Weekly. £63. ISSN 0009-3033.

This is a newsmagazine covering primarily the United Kingdom. It includes short articles and ads and presents news about products, people, law, business, and events.

759. **Chemotherapy: International Journal of Experimental and Clinical Chemotherapy.** Basel, Switzerland: S. Karger, 1960-. Bimonthly. \$150.00. ISSN 0009-3157.

Formerly called *Chemotherapia*, this journal is published in English. It serves the interests of scientists in the fields of antibacterial, cytostatic, and antiviral chemotherapy by providing them with a record of new substances as they are developed. Representative papers on bacteriology, virology, oncology, and pharmacokinetics are also published.

Each issue contains about ten articles arranged under such headings as pharmacology, microbiology, experimental chemotherapy, and clinical reports.

760. **Clin-Alert.** Louisville, KY: Science Editions, 1962-. Semimonthly. \$67.00. ISSN 0069-4770.

Each issue of this six-page newsletter consists of abstracts of current reports dealing with adverse drug reactions, interactions, and related therapeutic hazards. Literature references are included. Indices to the publication are cumulated quarterly.

761. **Clinical and Experimental Pharmacology and Physiology.** Melbourne, Australia, and London, England: Blackwell Scientific Publications, 1974-. Bimonthly. \$212.00. ISSN 0305-1870.

An official publication of the Australasian Society of Clinical and Experimental Pharmacologists and the High Blood Pressure Research Council of Australia, this journal is a medium for rapid publication of original research papers and short communications on the results of clinical and experimental work in pharmacology and physiology. It includes comments and replies regarding papers published in earlier

issues. Invited reviews appear occasionally. Supplements are issued from time to time that publish proceedings of the Society's meetings.

Each issue includes about 12 articles and a few short communications.

762. Clinical Neuropharmacology: A Journal of Reviews and Original Investigations in the Pharmacology of Central Nervous System Dysfunction. New York: Raven Press, 1976- . Quarterly. \$59.00. ISSN 0362-5664.

The first four volumes (1976-1979) of this publication were issued in book form. The journal is devoted to the pharmacology of the nervous system in its broadest sense and covers topics ranging from basic mechanism of action, structure-activity relationships, drug metabolism, and pharmacokinetics to such practical clinical problems as drug interactions and toxicity and the therapeutics of specific syndromes. Classic neurologic disorders and illnesses often considered to be psychiatric in origin are also covered. Included are invited and submitted reviews, original investigations, and brief communications.

763. Clinical Pharmacokinetics. Newtown, PA: ADIS Press, 1976- . Bimonthly. \$60.00. ISSN 0312-5963.

This periodical publishes original and review articles on the various aspects of clinical pharmacokinetics. It is intended to serve those involved with the clinical use of drugs. Each year six 80-page issues are published, and each issue contains about six articles.

764. Clinical Pharmacology and Therapeutics. St. Louis, MO: C. V. Mosby, 1960- . Monthly. \$83.00 per year. ISSN 0009-9236.

An official publication of the American Society for Clinical Pharmacology and Therapeutics and also of the American Society for Pharmacology and Experimental Therapeutics, this journal publishes almost exclusively articles that report original research, with an occasional commentary article. In addition, there are sometimes notes from the societies, perhaps announcing a meeting date, and a list of books received.

An interesting feature is that each issue publishes a "USAN List," which is a list of accepted nonproprietary names that have been adopted by the United Adopted Names (USAN) Council. (See also *USAN and the USP Dictionary of Drug Names*, entry 356).

765. Clinical Pharmacy. Bethesda, MD: American Society of Hospital Pharmacists, 1982- . Bimonthly. \$45.00. ISSN 0278-2677.

Widely read by hospital pharmacists, this journal gives priority to publishing studies that evaluate drug effects in human trials, evaluative review articles on the clinical uses of new drugs, and evaluations of the current status of drug therapy in selected diseases. Also included are articles covering pharmacokinetics and biopharmaceutic studies in humans and drug experience reports.

The journal includes these sections: drug reviews, therapy reviews, research notes, grand rounds, drug experience (unusual experiences), therapy consultation, letters, commentaries, editorials, continuing education, current literature, and news.

766. Clinical Research Practices and Drug Regulatory Affairs. New York: Marcel Dekker, 1983- . Quarterly. \$75.00. ISSN 0735-7915.

Intended for clinical monitors, drug regulatory personnel, research administrators, and others active in clinical research, this journal covers the latest advances, findings, and innovations of clinical research practices in the pharmaceutical industry. Topics covered include experimental design, monitoring practices, computer applications, administration of clinical research programs, quality assurance of clinical research, and the economics of drug development.

767. **Coming Abstractions.** Cincinnati, OH: Drug Intelligence and Clinical Pharmacy, 1982-. Bimonthly. \$9.00.

This three-page newsletter provides abstracts of articles scheduled to appear in *Drug Intelligence and Clinical Pharmacy* (see entry 785).

768. **ComputerTalk for the Pharmacist.** Blue Bell, PA: ComputerTalk Associates, 1981-. Monthly. \$30.00. ISSN 0736-3893.

This publication, intended primarily for the community pharmacist, provides basic information about computer systems in understandable language. There are articles, a book review section, meeting and conference notes, and vendor information. Also provided is an annual directory of pharmacy systems.

769. **Contemporary Drug Problems: A Law Quarterly.** New York: Federal Legal Publications, 1971-. Quarterly. \$36.00 per year.

Although most of the articles in this periodical are concerned with the legal aspects of drug abuse, some material is included on education, policy, social problems, treatment, employment, and other aspects of the drug problem. Book reviews are also included.

770. **Contraception: An International Journal.** Los Altos, CA: Geron-X, 1970-. Monthly. \$130.00. ISSN 0010-7824.

The purpose of this journal is to provide a medium for the rapid communication of advances and new knowledge in the field of contraception. Included are concise reports of original research in the experimental and clinical aspects of all areas of the subject such as chemistry, biochemistry, physiology, endocrinology, biology, the medical sciences, and demography. Each issue contains nine or ten articles, each with an abstract.

771. **Controlled Clinical Trials: Design and Methods.** New York: Elsevier Publishing, 1979-. Four times per year. \$96.00. ISSN 0197-2456.

An official publication of the Society for Clinical Trials, this journal publishes papers dealing with the design, methods, and operational aspects of prospective follow-up studies, with an emphasis on controlled clinical trials. The intended audience includes researchers and professionals in the fields of medicine, biostatistics, epidemiology, computer science, management science, behavior science, and bioethics.

772. **Cosmetics and Toiletries.** Volume 91-. Wheaton, IL: Allured Publishing, 1976-. Monthly. \$40.00 per year.

Called "An International Magazine of Product Development," this publication continues in part *Cosmetics and Perfumery*, which ceased publication in 1975. It is an

attractive magazine, printed on slick paper and containing many colored ads. Each issue usually contains news (personal, company, and association), several technical articles, a review of regulations, reviews of technical books, and a calendar of meeting dates of relevant societies. Special issues are published from time to time covering such topics as fragrances, skin care, or polymers in cosmetics. Of recent years the August issue has been called the "Cosmetic Bench Reference: An Encyclopedia of Cosmetic Materials." Materials are listed, with the supply sources indicated. In some cases the products are identified with a temporary number to be used until Chemical Abstracts Service assigns a permanent registry number.

773. Cosmetic World News: The International News Magazine of the Perfumery, Cosmetics, and Toiletries Industry. London, England: World News Publications, 1950-. Six times per year. ISSN 0305-0319.

A tabloid-type publication, this news magazine of the cosmetic and related industries features these sections: Newscast; Sum and Substance; People; Book Reviews; Personnel and Industry News; Stock Exchange; Consumer Comments; Product Information; Packaging World News; and lists of products with prices. There are many attractive colored ads.

774. Current Concepts in Retail Pharmacy Management. Chicago, IL: Sieber and McIntyre, 1983-. Bimonthly. \$60.00.

Circulated free to selected retail pharmacies, this journal contains editorials, three or four articles on management suitable for the retail pharmacist, meeting notices, and a self-assessment page of questions (with answers provided).

775. Current Therapeutic Research: Clinical and Experimental. Tenaflly, NJ: Therapeutic Research Press, 1959-. Monthly. \$60.00. ISSN 0011-393X.

This journal, designed for the prompt publication of articles describing the results of original research in the broad field of medical therapy and related areas, publishes about 27 articles in each issue.

776. Dangerous Properties of Industrial Materials Report. New York: Van Nostrand Reinhold, 1980-. Bimonthly.

Each issue of this journal contains two sections: "Features" and "Hazardous Materials." The features section consists of about three articles on such subjects as the toxicology of various substances, hazards in the environment, and occupational health and safety. The hazardous materials section presents alphabetically by chemical name abbreviated monographs on various substances with the following information provided: synonymous names, NIOSH (National Institute for Occupational Safety and Health) and CAS RN (Chemical Abstracts Service Registry Numbers) numbers, formula, molecular weight, description, and toxicity data. The material is similar to and supplements that found in Sax's *Dangerous Properties of Industrial Materials* (entry 614).

777. Deutsche Apotheker Zeitung: Unabhängige pharmazeutische Zeitschrift für Wissenschaft und Praxis. Stuttgart, Germany: Deutscher Apotheker Verlag, 1861-. Weekly. DN 156. ISSN 0011-9857.

This excellent publication is intended mainly for the German practitioner of pharmacy, although it contains much scientific information in addition to the kind of thing usually included in American periodicals for the practicing pharmacist. News, drug recall information, book reviews, meeting notices, abstracts of meeting papers, and information about pharmacy affairs in Germany are included.

778. Developmental Pharmacology and Therapeutics: International Journal of Perinatal-Pediatric Pharmacology and Drug Therapy. Basel, Switzerland: S. Karger, 1980-. Six times per year. \$119.00. ISSN 0379-8305.

The first comprehensive journal of this field, this publication presents papers on the effects of drug disposition as related to human developmental events. Clinical studies, animal research relevant to general developmental pharmacology, preliminary clinical and laboratory observations, and reviews of recent advances in perinatal and pediatric drug therapy are included. Practical reports that evaluate relevant new drugs are also published.

779. Drug and Chemical Toxicology: An International Journal for Rapid Communications. New York: Marcel Dekker, 1978-. Six times per year. \$125.00. ISSN 0148-0545.

This journal publishes full-length research papers, review articles, and short notes pertaining to animal toxicology, teratology, mutagenesis, and carcinogenesis. The intended audience includes toxicologists and those concerned with the safety evaluation of drugs and chemicals. Each issue contains six to eight articles.

780. Drug and Cosmetic Industry: The Magazine of Manufacturing, Formulation, Research and Development, Packaging and Marketing. New York: Harcourt Brace Jovanovich, 1914-. Monthly. \$18.00. ISSN 0012-6527.

This is an industrial magazine that features articles (six to seven per issue) and departments of interest to those involved in the formulation, raw material purchase, production, packaging, and sale of pharmaceuticals, cosmetics, fragrance products, aerosols, flavors, and specialty chemical products. These departments are included: International news; Washington news; Book reviews; Industrial news; Machinery and equipment; Compounding information; Trade literature; and Coming events. There are, in addition, editorials, a packaging section, and many colored ads.

781. Drug Development and Industrial Pharmacy. New York: Marcel Dekker, 1974-. Ten times per year. \$195.00. ISSN 0363-9045.

Concerned with all aspects of the development and production of drugs and pharmaceutical products, this journal includes both technologic and organizational aspects of industrial pharmacy. Book reviews are included. Subjects covered include drug regulatory affairs, formulation, including pharmacokinetic aspects, international pharmaceutical issues, good manufacturing practice, and quality control. Each issue contains 10-12 articles.

Readership includes persons working in pharmaceutical production, research and development, quality control, and regulatory agencies, industry administrators, professors, students, and government regulatory agency personnel.

782. **Drug Development Research.** New York: Alan R. Liss, 1981- . Six issues per year. \$150.00. ISSN 0272-4391.

An international journal devoted to clinical and preclinical investigation in pharmacology and toxicology, this periodical publishes original research papers reporting systematic studies in pharmacology and toxicology. Emphasis is on the development of safe and efficacious drugs. In addition to research papers, brief communications are also published that report on new methods, techniques, apparatuses, concepts, and preliminary experimental results. Reviews, theoretical papers, symposia proceedings, and comprehensive monographs are occasionally published.

783. **Drug Information Journal: Official Publication of the Drug Information Association.** New York: Pergamon Press, 1966- . Quarterly. \$50.00. ISSN 0012-656X.

Until mid-1972 this publication was called *Drug Information Bulletin*. Its purpose is to disseminate information on manual and automated drug information systems, foster communication between educational research, industrial, and government personnel engaged in drug information activities, and provide a forum for the development of improved methods of presenting research data generated from chemical, toxicologic, pharmacologic, and clinical studies. Each issue contains an editorial and 10-12 articles.

The journal is of interest to drug industry specialists and computer professionals, hospital pharmacists, government regulatory personnel, academics and librarians in the health sciences, and biostatisticians.

784. **Drug Information Service.** Amsterdam, The Netherlands: Elsevier Science Publishers, 1983- . 24 issues per year. About \$300.00 per section.

This publication is composed of a series of bulletins, most on a different category of drug. The bulletins provide abstracts of biomedically and pharmaceutically oriented drug information of interest to clinical and experimental pharmacologists in research, industry, and practice and to organic chemists. The information is derived from the EMBASE database (entry 687) and contains relevant items from about 900 journals. Each bulletin contains the abstracts classified into different sections, cross-references, and a subject index.

The following interest areas are included in the service: antibiotics, chemotherapeutics and other anti-infective drugs; analgesics and anti-inflammatory drugs; psychoactive drugs; cardiovascular drugs; nervous system drugs; antineoplastic drugs; gastrointestinal drugs; dermatologicals and cosmetics; respiratory drugs; drug delivery systems; adverse reactions and drug toxicity; and anesthetics.

785. **Drug Intelligence and Clinical Pharmacy: The Journal for Drug Therapy Decision Makers.** Cincinnati, OH: Drug Intelligence and Clinical Pharmacy, 1967- . Monthly. \$110.00. ISSN 0012-6578.

The intent of this widely read publication is to improve the effectiveness of clinical pharmacy in fulfilling its responsibility to the health professions and the public. Each issue includes about six articles and these departments: letters, editorials, opinions, current therapeutic findings, literature (book reviews), fellowship and residency information, personnel placement, meetings, pharmacy continuing education test questions, news, and comments.

786. **Drug Metabolism and Disposition: The Biological Fate of Chemicals.** Bethesda, MD: American Society of Pharmacology and Experimental Therapeutics, 1973- . Bimonthly. \$95.00. ISSN 0090-9556.

This journal publishes *in vitro* and *in vivo* experimental results on xenobiotic metabolism and disposition, including metabolism of all pharmacologic agents or drugs and environmental chemicals, reactants, and preservatives. Areas covered are pharmacokinetics, pharmacodynamics, and mechanisms; genetic, nutritional, or hormonal factors affecting the biologic fate of chemicals; and toxicologic consequences of xenobiotic metabolism. Each issue publishes about 20-25 articles, a few short communications, book reviews, and perhaps some announcements.

The journal is a good resource for medicinal chemists involved in designing drugs and biochemists involved with drug metabolism.

787. **Drug Metabolism Reviews.** New York: Marcel Dekker, 1972- . Eight times per year. \$295.00. ISSN 0360-2532.

This journal presents in-depth reviews dealing exclusively with drug metabolism and the field's interfaces with many research areas. More specifically, it deals with the fate of drugs and other foreign compounds in any biologic system. The presentation of scientific hypotheses and historical perspectives is encouraged.

788. **Drug Newsletter.** St. Louis, MO: Facts and Comparisons, a division of J. B. Lippincott, 1982- . Monthly. \$36.00. ISSN 0731-5163.

Also called *Facts and Comparisons Drug Newsletter*, this eight-page publication summarizes information on new findings and recent developments in drug therapy. It contains sections such as keeping up, investigational drugs, actions and reactions, drug interactions, recent reports, drugs of choice, and new drugs.

789. **Drug-Nutrient Interactions.** New York: Alan R. Liss, 1981- . Quarterly. \$70.00. ISSN 0272-3530.

Intended to serve as a medium for the publication of studies in the field of the effects of pharmacologic agents and nutrients on each other, this journal is of interest to investigators and clinicians in pharmacology, nutrition, and toxicology. The issues contain reports of original research, invited review articles, book reviews, reviews of meeting papers, and citations to relevant literature.

790. **Drugs.** Auckland, New Zealand: ADIS Press, 1971- . Monthly. \$29.00. ISSN 0012-6667.

This is a journal of current therapeutics and applied pharmacology reviews that contains evaluations of new drugs, review articles, and practical therapeutics articles. In addition, there are selected summaries of major articles published in world literature; guide charts on efficacy, properties, and hazards of drugs; and guest editorials. Each issue has a leading article or two that focus on a special drug.

791. **Drug Store News.** New York: Lebhar-Friedman, 1979- . Biweekly. \$15.00. ISSN 0191-7587.

This tabloid-type news publication supersedes *Chain Store Age, Drug Edition*. It serves drug chain stores, wholesalers, and high-volume independents. These sections are included: financial, merchandise, pharmacy, pharmacy product update, special reports, and classifieds.

792. **Drug Therapy.** New York: Biomedical Information Corporation, 1971- . Monthly. \$39.00 per year, free to practicing physicians. ISSN 0001-7094.

This journal has had several subtitles since its inception, including "Prescribing Practices and Problems," "Journal of Prescribing Information," and "The Journal of Clinical Therapeutics." Each issue contains several original articles on use and action of therapeutic agents; features such as a new drug section, letters, and short articles intended to assist the reader in keeping up; and many ads.

Each issue has a special section, "Compendium of Drug Therapy," which is an update for *The Osteopathic Physician's Compendium of Drug Therapy* (entry 327).

793. **Drug Therapy. Hospital Edition.** New York: Biomedical Information Corporation, 1976- . Monthly. \$39.00 per year. ISSN 0160-9459.

Subtitled "Clinical Therapeutics in the Hospital," this journal is similar to *Drug Therapy* (entry 792), but it is oriented more to hospital practice. Each issue contains several original articles, ads, and features such as one on keeping up to date and one on new drugs. It issues a special supplement of interest to certain specialists that a physician may request.

Like *Drug Therapy*, each issue has a special section, "Compendium of Drug Therapy," which is an update for *The Osteopathic Physician's Compendium of Drug Therapy* (entry 327).

794. **Drug Topics.** Oradell, NJ: Medical Economics, 1857- . Semimonthly except December (once). \$34.00.

Drug Topics is intended to help pharmacists in their professional practice. It is of value to those in independent and chain drugstores, hospital pharmacists, wholesale druggists, and others in product distribution. News from Washington is reported and interpreted, as is news from state legislatures and pharmaceutical organizations. Trends in the pharmaceutical sciences are reported and management and sales problems discussed.

A special section was included in a recent fall issue which is a career guide for pharmacy graduates.

795. **Eastern Pharmacist.** New Delhi, India: Eastern Pharmacist (507, Ashok Bhawan, 93, Nehru Place, New Delhi-110-019, India), 1958- . Monthly. ISSN 0012-8872.

Called "An Independent Organ of the Pharmaceutical Industry, Trade, and Profession," this periodical contains letters to the editor; articles, new pharmaceutical product information, book reviews, news of the industry, associations, foreign matters, and trade; and a scientific section. There are many ads.

796. **Economic Botany.** Bronx, NY: Society for Economic Botany, 1947- . Quarterly.

This journal is "devoted to past, present, and future uses of plants by man." It specializes in scientific articles, emphasizing uses rather than the growing of plants. Each issue has a section of book reviews and includes reports of annual meetings and other notices of the society. Articles on medicinal uses of plants are frequently published.

797. **European Journal of Clinical Pharmacology.** Berlin, Germany: Springer-Verlag, 1970-. Monthly. \$368.00. ISBN 0031-6970.

This publication continues *Pharmacologia Clinica*. It publishes original papers on all aspects of pharmacology and drug therapeutics in man. Also published are short communications, editorials, and review articles on special problems related to these subjects. Included are contributions on therapeutic trials, reports on adverse reactions, drug metabolism, pharmacokinetics, and drug interactions. About 20-25 articles are included in each issue, including the short communications.

798. **European Journal of Medicinal Chemistry: Chimie Thérapeutique.** Châtenay-Malabry, France: Société d'Etudes de Chimie Thérapeutique, 1974-. Bimonthly. 660Fr. ISSN 0223-5234.

This publication continues *Chimica Therapeutica*. It publishes original papers, laboratory notes, and short communications, in English usually but occasionally in French or German. All aspects of medicinal chemistry are covered. The issues annually include a new products section and book reviews. Summaries of articles are provided in English, German, and French.

799. **European Journal of Pharmacology: An International Journal.** Amsterdam, The Netherlands: Elsevier Science Publishers, 1967-. 30-35 issues per year. \$900.00. ISSN 0014-2999.

This journal absorbed an earlier publication, *Acta Physiologica et Pharmacologica Neerlandica*. It publishes, in English, regular papers, short communications, and rapid communications in animal and human pharmacology in the broadest sense.

About 35-40 articles are included in each issue.

800. **FDA Consumer.** Rockville, MD: U.S. Food and Drug Administration, 1967-. Monthly.

Formerly called *FDA Papers*, this is the official magazine of the U.S. Food and Drug Administration. It provides factual, reliable information for consumers on health, medicine, cosmetics, and foods. It helps put such matters as "natural" and "health" foods, patent medicines, anticancer drugs, vitamins, nutrition, and medical devices in perspective.

Each issue contains several articles; notices of legal actions, judgments, and seizures; and news. There is no advertising. The publication is valuable for health professionals and the public.

801. **FDC Reports: The "Pink Sheet."** Chevy Chase, MD: FDC Reports, 1939-. Weekly. \$400.00.

This newsletter is subtitled "Prescription and OTC Pharmaceuticals." It is intended for executives in the pharmaceutical industry but it is also of interest to educators in pharmacy schools. It contains news and information on legislation and regulations, including recalls and new drug approvals, prescription price comparisons, sales earnings, stock reports, and high-level personnel changes in the Food and Drug Administration and the drug industries.

The first page of each issue is a rather detailed table of contents, but there is no index. The publication is, however, indexed in the *Pharmaceutical News Index* (entry 48), and there is a database available covering 1975 to the present (entry 699).

Available to subscribers is *The Mid-Week Report*, which updates and augments the in-depth, end-of-the-week coverage of "The Pink Sheet."

802. **Il Farmaco. Edizione Scientificá.** Pavia, Italy: Società Italiana di Scienze Farmaceutiche, 1946- . Monthly. L120,000. ISSN 0014-827X.

Another edition of this periodical is called the "Edizione Practica." The text is in English, French, German, or Italian. The scientific edition contains articles presenting results of original research, about eight to an issue.

803. **Farmakologiya i Toksikologiya.** Moscow, USSR: Akademiya Meditsenskikh Nauk SSSR, 1938- . Bimonthly. \$10.80. ISSN 0014-8318.

English-language summaries and tables of contents are provided in this Russian periodical. Included are original articles in such areas as drug pharmacodynamics, drug pharmacokinetics, experimental pharmacology, drug toxicity, research methods, and history of pharmacology. Also included are editorials, reviews of literature, book reviews, and reports of current events and other information.

804. **Food and Chemical Toxicology.** Oxford, England: Pergamon Press, 1982- . Monthly. \$410.00. ISSN 0278-6915.

Subtitled "An International Journal Published for the British Industrial Biological Research Association," this publication was called *Food and Cosmetics Toxicology* from 1963 to 1981. It contains original papers, reviews, and letters covering all aspects of toxicology. Meeting announcements are sometimes included. Each issue contains six to eight articles. The emphasis is on food.

805. **Food, Drug, Cosmetic Law Journal.** New York: Academic Press, 1946- . Quarterly. \$64.00. ISSN 0015-6361.

Early issues of this journal were called *Food, Drug, Cosmetic Law Quarterly*. Published under the auspices of the Food and Drug Law Institute, the policy of the journal is to record, examine, and discuss the progress of law in the fields of food, drugs, cosmetics, medical devices, and biologics. Regulatory and judicial developments and trends with analyses, commentary, and overviews are provided. Issues occasionally are devoted to a single topic or theme.

Each issue has six or seven articles, and book reviews and abstracts of current articles from other journals are sometimes published.

The journal is of primary interest to corporate and private attorneys, regulatory affairs staff in the food and drug industries, and state and federal regulatory officials.

806. **Fundamental and Applied Toxicology: An Official Journal of the Society of Toxicology.** New York: Academic Press, 1981- . Bimonthly. \$98.00. ISSN 0272-0590.

This journal, which was expanded in 1985 to include more material, publishes scientific articles and reports relating to broad aspects of toxicology that are relevant to assessing the risk or effects of toxic agents (such as chemicals, including drugs, and natural products or forms of energy) on human and other animal health. Included are articles on statistical and mathematical methods, safety evaluations, methods of toxicity evaluation as an alternative to animal experimental studies, equipment, regulatory issues, and symposia articles and reviews. There are special sections covering meetings, book reviews, and letters to the editor.

807. **GMP Trends.** Boulder, CO: GMP Trends (P.O. Box 8001, Boulder, CO 80306), about 1977-. Semimonthly. \$215.00.

This four-page newsletter is intended for the pharmaceutical and related industries, especially for directors of quality assurance concerned with good manufacturing practices (GMP). It contains material taken from inspection reports of American firms. Topics covered include manufacturing controls, sterile product controls, laboratory controls, and medical devices critical components.

808. **General Pharmacology.** Oxford, England: Pergamon Press, 1970-. Bimonthly. \$230.00. ISSN 0306-3623.

Results of original research on all aspects of pharmacology are published in this journal. Special consideration is given to articles dealing with the subject from a comparative point of view, however. Also published are review articles, short communications, and book reviews.

809. **Generics Magazine.** New York: Generic Pharmaceutical Industry Association, 1984-. Quarterly. \$12.50. ISSN 0742-308-X.

An attractive publication with colored illustrations, this journal publishes material of interest to generic drug manufacturers. Each issue contains several articles and such features as letters, generic drug reference material, Wall Street news, and ads.

810. Hansten, Philip D. **Drug Interactions Newsletter.** San Francisco, CA: Applied Therapeutics, 1980-. Monthly. \$27.00. ISSN 0271-8707.

This newsletter, usually four pages in length, reports on drug interactions, analyzing them and assessing their clinical significance. Each month a pharmacologic class of drugs is reviewed. The information is presented under these headings: reported studies, mechanisms, comments, and summary.

811. **Health Policy and Biomedical Research: "The Blue Sheet."** Chevy Chase, MD: FDC Reports, 1957-. Weekly. \$250.00. ISSN 0162-3605.

Formerly called *Drug Research Reports: "The Blue Sheet,"* this newsletter covers health policy and biomedical research. The health policy coverage includes issues relating to Medicare/Medicaid, public health, health professions education and supply, health planning, and federal programs affecting the health care system and industry of the United States. The biomedical research coverage includes issues affecting the National Institutes of Health; the Alcohol, Drug Abuse, and Mental Health Administration; the National Science Foundation; the Institute of Medicine; and other federal research efforts. The publication also focuses on university and industrial biomedical research, including the regulation of biomedical research by the Food and Drug Administration.

812. **The Herb Quarterly.** Wilmington, VT: The Herb Quarterly (Box 576, Wilmington, VT 05363), 1979-. Quarterly.

New ideas and techniques in growing and using herbs are reported by amateur and professional botanists in this journal. Most aspects of the subject are covered, including history, folklore, recipes, and artistic use of pictures of herbs. There are attractive illustrations and a good deal of advertising. Special features include letters, book reviews, questions and answers, and a column about public herb gardens.

813. **The Herbarist.** Boston, MA: Herb Society of America, 1935- . Annual.

Each issue of this attractive publication contains some official information about the Herb Society of America, such as a list of officers, directors, and committee chairmen, and notes about the annual meeting. In addition, there are several articles, book reviews, illustrations, poetry, and advertisements. The material included is well chosen. The articles do not contain exaggerated claims regarding the value of herbs; the approach is sensible. The articles cover history, techniques of growing herbs, herbal gardens, folklore, recipes, and artistic use of the plants. The 1978 issue contained a list of herb nomenclature changes from *Hortus II*, 1941 edition, to *Hortus III*, 1976 edition.

814. **High Times.** Framingham, NY: Trans-High Corporation (P.O. Box 965, Framingham, NY 11735), 1975- . Monthly. \$24.50.

In spite of the underground nature of the material presented in this periodical, it is attractive in many respects, with many color photographs and a conventional format. Drug use is encouraged and made to appear desirable. Included in each issue are a number of featured articles on matters of interest to drug users (such as stories on illegal drug smuggling) and several features, including letters to the editor, record and book reviews (especially in earlier issues), and a page of market quotations on illicit drug products from all over the world. A good deal of pornography is included.

An outstanding (and unusual) aspect of the magazine is the advertising, which includes a wide range of drug paraphernalia, drugs themselves, drug plant seeds, books, jewelry, clothing, and art objects for the drug enthusiast. Many of the ads are in full color. The magazine evidently has been quite successful and has a wide distribution. If no other redeeming features of it can be found, it certainly provides the reader with a glimpse of the current drug scene.

815. **Hospital Formulary.** New York: Modern Medicine Publications, 1966- . Monthly. \$20.00. ISSN 0098-6909.

Called "A Refereed Journal for the Pharmacy and Therapeutics Committee" and "The P & T Committee Journal," until 1975 this publication was entitled *Hospital Formulary Management*. It contains editorials, original and review articles, a section called "Focus" that discusses recently approved or investigational drugs, commentary, and departments. The latter includes news capsules and literature abstracts.

816. **Hospital Pharmacy.** Philadelphia, PA: J. B. Lippincott, 1966- . Monthly. \$41.00 per year. ISSN 0018-5787.

Intended primarily for hospital pharmacists, this journal publishes articles in all areas of interest to pharmacists who serve inpatients and outpatients in hospitals, long-term facilities, and other institutional settings. Others, such as hospital administrators, purchasing agents, and directors of nursing services who are responsible for the purchasing, packaging, and distribution within the hospital, also find it of value. Included are reports on clinical laboratory tests, administration and nursing, drug therapy, unit dosage, medication errors, formulary maintenance, and basic information regarding the hospital pharmacy field.

817. **IRCS Medical Science: Clinical Pharmacology and Therapeutics.** Lancaster, England: Elsevier-IRCS, ca. 1975- . Bimonthly. \$69.00. ISSN 0305-6759.

IRCS (International Research Communications System) Medical Science is a journal for the rapid publication of original articles in the entire field of medical and biomedical science. It is available as a complete edition or as a series of 32 sections. The publication under review is a section devoted to clinical pharmacology and therapeutics. The papers published in it are selected from the complete edition.

The full text of articles from this journal can be retrieved from an online database (entry 693).

818. **IRCS Medical Science: Drug Metabolism and Toxicology.** Lancaster, England: Elsevier-IRCS, Volume 4, 1976-. Bimonthly. \$76.00. ISSN 0309-1503.

The publication under review is another section of *IRCS Medical Science* (entry 817), which is devoted to the fields of drug metabolism and toxicology. The papers in it are selected from the complete edition. There are research communications, theoretical or review articles, and letters to the editor. There are about 50-55 articles in each issue.

The full text of articles from this journal can be retrieved from an online database (entry 693).

819. **IRCS Medical Science: Pharmacology.** Lancaster, England: Elsevier-IRCS, Volume 3, 1974-. Monthly. \$162.00. ISSN 0305-6872.

This is another section of *IRCS Medical Science* (see entries 817 and 818). The papers published in it are taken from the full sequence of articles published in the complete edition. There are about 25 articles per issue covering the field of pharmacology.

The full text of articles from this journal can be retrieved from an online database (entry 693).

820. **Immunopharmacology.** New York: Elsevier Science Publishers, 1978-. Quarterly. \$190.00. ISSN 0162-3109.

Immunopharmacology combines the fields of immunology and pharmacology, providing a medium for the publication of articles and short communications in such areas as the action of hormones and their mediators; hormones and cell factors endogenous to the immune system; cellular components that assist in regulating the functioning of cells synthesizing antibodies; mediators of immediate and delayed-type hypersensitivities; pharmacologic substances used as probes into molecular and cellular events involved in immunologic responses; and viral and gene products operative in immunopathology. The intended audience includes immunologists, pharmacologists, and biochemists.

821. **Indian Journal of Hospital Pharmacy.** New Delhi, India: Indian Hospital Pharmacists' Association, 1964-. \$15.00. Bimonthly. ISSN 0019-526X.

An official journal of the Indian Hospital Pharmacists' Association, this publication is in English. Each issue contains several scientific articles or those of professional interest, association news and business, general news, book reviews, and ads.

822. **Indian Journal of Pharmaceutical Sciences.** Bombay, India: Indian Pharmaceutical Association, 1939-. Bimonthly. 150 Rs. ISSN 0250-474X.

This "Scientific Publication of the Indian Pharmaceutical Association" was formerly entitled *Indian Journal of Pharmacy*. It contains research papers, review articles, short communications, and book reviews.

823. **Infusion.** Winchester, MA: Artemis Publishing, 1977- . Bimonthly. \$20.00. ISSN 0160-757X.

A journal intended for those in all disciplines of the health care delivery system (such as pharmacists, intravenous therapists, nurses, and physicians), this publication contains four or five articles per issue on topics related to hospital medicine. Correspondence is included.

824. **Inpharma.** Auckland, New Zealand: ADIS Press, 1975- . Weekly. \$675.00. ISSN 0377-0095.

In newsletter format this weekly periodical provides reports from the current international drug literature. Each issue, about 20 pages, presents these sections: viewpoints, cost-benefit studies, R & D, drug prescribing, therapy, clinical pharmacology, recent reviews, and new product introductions. The publication keeps the reader in touch with many drug and therapeutic areas. Monthly indices are cumulated every six months and annually.

825. **International Drug Therapy Newsletter.** Baltimore, MD: Ayd Medical Communications, 1966- . Monthly, except for July and August. \$20.00. ISSN 0020-6571.

This newsletter is usually four pages in length. Each issue presents a main article on a drug, including its pharmacology, properties, onset of action, side effects, interactions, and toxicity. Literature references are included.

826. **International Journal of the Addictions.** New York: Marcel Dekker, 1966- . Eight times per year. \$225.00. ISSN 0020-773-X.

The aim of this journal is to provide a comprehensive medium for international communication among concerned laypersons and professionals in research, training, and treatment in the field of addiction and substance abuse. An interdisciplinary point of view is taken, including legal, societal, and medical aspects of the subject. Both theoretical and practical articles are included. Some papers present original research, and some are reprints. Book reviews, abstracts, and reports of new community programs are included. The issues usually contain a section of research notes with brief descriptions of research being carried out. Other notes are also included that may report on treatment results.

827. **International Journal of Clinical Pharmacology, Therapy, and Toxicology.** München, Germany: Dustri-Verlag, 1967- . Monthly. \$122.50. ISSN 0174-4879.

This publication has had other titles in the past, the most recent one (until 1980) *International Journal of Clinical Pharmacology and Biopharmacy*. It is an official publication of the International Society of Chemotherapy and several other similar societies. Included are original papers, outline summaries of special problems, short news items on new developments, and other topics of current interest. Each issue contains eight to ten scientific papers.

828. **International Journal of Crude Drug Research.** Lisse, The Netherlands: Swets and Zeitlinger (P.O. Box 825, 2160 SZ, Lisse, The Netherlands), 1961-. Quarterly. \$76.85 per year. ISSN 0033-5525.

There has been an increasing interest of late in drugs of natural origin (as compared with synthetics). A number of successful drugs have been introduced recently, and pharmaceutical companies occasionally send representatives to distant lands to explore for materials of possible value. Research institutes also are searching for new crude materials of value in solving problems of health and disease. The editors of this journal feel that there is a need for scientific and practical information on many plant and animal materials. They feature experimental studies and reviews of less well-known drugs because information on them so often has been scanty or lacking.

The journal is devoted to the history, taxonomy, ecology, geographic distribution, morphology, histology, chemistry, methods of identification and determination, pharmacology, and local popular uses of plant and animal crude drugs.

Papers are accepted in English, French, German, or Spanish. However, of recent years nearly all have been in English. Book reviews are included.

829. **International Journal of Immunopharmacology.** New York: Pergamon Press, 1979-. Quarterly. \$120.00. ISSN 0192-0561.

This journal publishes high-quality original scientific articles that deal with the relationship between immunology and pharmacology. The main emphasis is on research papers, but preliminary communications are also included, as are editorials, commentaries, and prospective reviews and hypotheses. Among the topics covered are the use of drugs and other chemicals in investigating the nature and role of various components of the immune response; drug pharmacokinetic studies relating to immunology; studies on the role of lymphocytes and other cells of the immune system in the biotransformation of xenobiotics; and classic pharmacologic studies of the lymphokines released during immunologic reactions.

830. **International Journal of Pharmaceutical Technology and Product Manufacture.** London, England: Childwell University Press, 1979-. Quarterly. \$84.00. ISSN 0260-6267.

Designed to bring useful advances in the field of pharmaceutical technology and product manufacture to the attention of the reader, this journal concentrates on such subject areas as methods for isolating active raw materials; the analysis of drugs; impurities and degradation products; the physical, chemical, and biopharmaceutical characteristics of drugs, excipients, and medicinal dosage forms; dosage form design; process mechanisms and control; product manufacture; packaging; regulatory affairs; and quality assurance. Included are research and review articles and short communications. There are usually four or five articles per issue.

831. **International Journal of Pharmaceutics.** Amsterdam, The Netherlands: Elsevier Science Publishers, 1978-. Monthly. \$355.50. ISSN 0378-5173.

The aim of this periodical is to provide a medium for publication in areas of drug formulation and preformulation such as the following: drug-delivery systems, physical pharmacy, biopharmaceutics, pharmacokinetics, drug design, pharmaceutical technology and manufacturing processes, radiopharmaceuticals, pharmaceutical

microbiology, sterility and sterilization, quality control of pharmaceuticals, and development of analytic procedures for pharmaceuticals. Minireviews are included that bring together developments in specific areas to keep the reader aware of current trends.

832. **Intravenous Therapy News.** New York: McMahon Publishing, Volume 11, No. 6, 1984- . Monthly. \$32.00.

Formerly called *American Journal of Intravenous Therapy and Clinical Nutrition*, this tabloid-type newsletter is called "The Newsmagazine for Hospital Pharmacists and I.V. Therapists." Useful information and articles are published, as well as news and ads. There is information about devices and clinical news, and there are tables showing such things as medications that qualified registered nurses may administer.

833. **Investigational New Drugs: The Journal of New Anticancer Agents.** The Hague, The Netherlands: Martinus Nijhoff Publishers, 1983- . Quarterly. \$88.00. ISSN 0167-6997.

Covering one of the most active aspects of cancer research, this journal provides a forum for the rapid dissemination of information on new anticancer agents. The intended audience includes the medicinal chemist, toxicologist, pharmacist, pharmacologist, biostatistician, and clinical oncologist.

Each issue contains six to eight articles dealing with anticancer drug development. Also included are status reports from cooperative oncology groups, reports from the National Cancer Institute on the status of new investigational agents, review articles, and letters to the editor. Proceedings of workshops and symposia are occasionally published.

834. **Japanese Journal of Pharmacognosy.** (Shoyakugaku Zasshi). Tokyo, Japan: Japanese Society of Pharmacognosy, 1947- . Quarterly. \$25.00. ISSN 0037-4377.

This journal, in Japanese with summaries in English, contains original articles (15-20 per issue) and notes. Recent issues contain a few English language articles.

835. **Japanese Journal of Pharmacology.** Kyoto, Japan: Japanese Pharmacology Society, 1951- . Monthly. \$72.00. ISSN 0368-3745.

This official publication of the Japanese Pharmacological Society supersedes an earlier journal, *Japanese Journal of Medical Sciences Section 4*. It publishes, in English, original papers dealing with the interaction of chemicals with biologic systems. Also included are articles on original methods in pharmacology. Each issue contains about 12-15 original articles and six to eight short communications. Supplementary issues publish proceedings of meetings of the society.

836. **The Journal.** Toronto, Canada: Addiction Research Foundation of Ontario, 1972- . Monthly.

This tabloid-sized publication is designed to familiarize professionals and other interested persons with recent developments in the field of alcohol drug dependence. It reports and interprets news in the areas of research, treatment, education, enforcement, and social policy. Book reviews are included, as are reviews of audiovisual aids.

837. **Journal of the American College of Toxicology.** New York: Mary Ann Liebert, 1982- . Quarterly. \$110.00. ISSN 0730-0913.

The official publication of the American College of Toxicology, this journal provides research papers and reports of issues and events that influence the field. There are also symposia papers, review articles, book reviews, and letters. The material is divided among these subsections: general toxicology, safety evaluation and risk assessment, reproductive toxicology, epidemiology and clinical toxicology, immunotoxicology, carcinogenesis, genetic toxicology, mechanisms of toxicity, development of nonanimal testing techniques, forensic toxicology, and quality assurance.

The intended audience includes toxicologists, pharmacologists, biochemists, ecologists, oncologists, teratologists, and geneticists in academia, industry, and government.

838. **Journal of Analytical Toxicology.** Niles, IL: Preston Publications, 1977- . Bimonthly. \$94.00. ISSN 0146-4760.

Each issue of this journal contains 10-12 scientific articles and technical notes, letters to the editor, and several departments. The latter includes meeting notices, news, information on new products, a list of new books and other literature, and ads. There are abstracts with the articles.

839. **Journal of Antibiotics: An International Journal Devoted to Research on Antibiotics and Other Microbial Products.** Tokyo, Japan: Japan Antibiotics Research Association, 1947- . Monthly. \$120.00. ISSN 0021-8820.

Formerly called *Journal of Penicillin*, this periodical is devoted to publication of research on antibiotics and other types of microbial products. It publishes microbiologic, biochemical, chemical, and pharmacologic studies but not those involving human therapy. Reports on recently discovered antibiotics are especially encouraged. Original articles, notes, communications to the editor, and review articles are published in English. Each issue contains an "Index of Antibiotics and other Microbial Products" where basic information on the products is given along with literature references.

840. **Journal of Antimicrobial Chemotherapy.** New York: Academic Press, Volume 13-14, 1984- . Monthly. \$199.50. ISSN 0305-7453.

Published for the British Society for Antimicrobial Chemotherapy, this journal publishes original articles on laboratory and clinical aspects of antimicrobial use and reviews and articles on related subjects. Also included are letters to the editor and short reports on topics of current interest. Supplements are published occasionally.

The intended audience includes clinicians, microbiologists, pharmacologists, and research workers in the field.

841. **Journal of Autonomic Pharmacology.** North Humberside, U.K.: Galen Press, 1980- . Quarterly. \$80.00. ISSN 0144-1795.

This is an international journal (in English) that has as its primary mission the dissemination of significant new findings relating to the interactions of drugs and related agents with both central and peripheral divisions of the mammalian autonomic nervous system and its effector organs and tissues. It contains mainly original research articles but also some reviews. There are seven or eight articles per issue.

842. **Journal of Biological Response Modifiers.** New York: Raven Press, 1982- . Bimonthly. \$98.00. ISSN 0732-6580.

This journal provides rapid publication of papers on experimental, theoretical, and clinical aspects of biologic response modifiers. Special topics covered include immunomodulators, lymphokines, antibodies, cells, and cell products in cancer biology and therapy. Emphasized are basic mechanisms and methods for the rapid transfer of technology from the laboratory to the clinic. There are original articles, short communications, review articles, editorials, points of view, reviews of controversial areas, letters to the editor, and an update of "critical papers" published five to ten years earlier.

843. **Journal of Cardiovascular Pharmacology.** New York: Raven Press, 1979- . Bimonthly. \$118.00. ISSN 0160-2446.

This journal provides information on advances in cardiovascular drug research and use for cardiologists, pharmacologists, and pharmacists. There are articles on basic and clinical aspects of cardiovascular pharmacology, including such topics as new drug development and evaluation; physiologic and pharmacologic bases of drug action; metabolism; drug interactions and side effects; and clinical results with new and established agents. Included are regular articles, short communications, and letters to the editor. Each issue has about 35 articles with summaries provided. Supplements are issued occasionally on subjects of particular interest or complexity.

844. **Journal of Clinical Pharmacology.** Stamford, CT: Hall Associates, 1961- . Eight issues per year. \$55.00. ISSN 0091-2700.

This official journal of the American College of Clinical Pharmacology has had several titles in the past: *Journal of New Drugs*; *Journal of Clinical Pharmacology and the Journal of New Drugs*; and *Journal of Clinical Pharmacology and New Drugs*. It publishes original papers dealing with the clinical and pharmacologic effects of drugs. Most papers relate to the evaluation of drugs in patients or healthy volunteers. There are review articles, laboratory and clinical studies, human pharmacology papers, and pharmacokinetic studies. Brief reports also are published.

845. **Journal of Clinical Psychopharmacology.** Baltimore, MD: Williams & Wilkins, 1981- . Bimonthly. \$55.00. ISSN 0271-0749.

Intended for the clinician, this journal covers subjects that are directly related to practice, including clinical trials and studies, side effects, drug interactions, overdose management, pharmacogenetics, pharmacokinetics, and the psychiatric effects of nonpsychiatric drugs. Included are original articles, review articles, case reports, book reviews, and abstracts of relevant articles. In addition, there is a "Question the Experts" column and a "Forensic Update" column.

846. **Journal of Controlled Release: Official Journal of the Controlled Release Society.** Amsterdam, The Netherlands: Elsevier Science Publishers, 1984- . Quarterly. \$85.00. ISSN 0168-3659.

This journal deals with science and technology of the controlled release of active agents. The term "controlled release" is used in the broadest sense. Also included is some material on toxicology, pharmacokinetics, and biocompatibility. Original papers,

technical reviews, short communications, book reviews, reports of meetings, descriptions of new controlled-release products, meeting announcements, and activities of the Controlled Release Society are published.

847. **Journal of Ethnopharmacology: An Interdisciplinary Journal Devoted to Bioscientific Research on Indigenous Drugs.** Lausanne, Switzerland: Elsevier Sequoia S. A., 1979-. Nine times per year. \$170.00 per year.

This publication is primarily concerned with the investigation and description of the biologic activities and active substances of plants used in traditional medicines of past and present cultures. Many of these substances are drugs of abuse. Full-length papers describing original research, review articles, short communications describing limited investigations, and letters to the editor are published. Some book reviews are included.

848. **Journal of Immunopharmacology.** New York: Marcel Dekker, 1978-. Four times per year. \$85.00. ISSN 0163-0571.

Clinical and basic research articles are published in this journal, which is intended for immunologists, pharmacologists, biologists, and physicians. Papers on the following are included: studies that pertain to the use of agents to modulate the immune system or regulate inflammatory reactions; studies of the immune response as modulated by drugs and other agents; and studies of the agents themselves. Original papers, invited reviews, and brief communications are included.

849. **Journal of Labelled Compounds and Radiopharmaceuticals.** Chichester, England: John Wiley & Sons, 1965-. Monthly. \$395.00. ISSN 0362-4803.

From 1965 to 1975 the title of this publication was *Journal of Labelled Compounds*. It publishes original scientific papers and reviews covering all aspects of precursor and labeled compound preparations and related areas such as analysis, self-radiolysis, production problems, specialized methods, quality control, handling, and storage. Methods used in chemical, biochemical, biologic, agricultural, geochemical, pharmaceutical, genetic, and medical research and their applications are reported. Special issues containing meeting papers are published from time to time. Each issue contains about ten articles and notes and announcements.

850. **Journal of Medicinal Chemistry.** Washington, DC: American Chemical Society, 1958-. Monthly. \$156.00. ISSN 0022-2623.

Formerly entitled *Journal of Medicinal and Pharmaceutical Chemistry*, this journal presents original research articles, notes, and book reviews. There are about 20 articles in each issue. Supplementary material in microfiche form is also available.

851. **Journal of Natural Products (Lloydia).** Cincinnati, OH: American Society of Pharmacognosy and the Lloyd Library and Museum (917 Plum St., Cincinnati, OH 45202), 1938-. Bimonthly. \$75.00 per year. ISSN 0163-3864.

From 1938 to 1960 this journal was published by the Lloyd Library and Museum (a privately endowed library) and called *Lloydia*. In 1961 the American Society of Pharmacognosy joined with the library to produce a somewhat different publication. The title was changed to the present one in 1979, although the subtitle "Journal of Natural Products" was used for some years previously.

Early issues were devoted to the biologic sciences, especially drug plants. Bibliographies of old, rare works on drug plants, herbal medicine, and pharmacopoeias frequently appeared. More recent issues include papers on all aspects of natural products research. The highly scientific contributions relate to the chemistry and biochemistry of naturally occurring compounds or the biology of living systems from which they are obtained. Some specific areas covered are secondary metabolites of microorganisms (such as antibiotics and mycotoxins); physiologically active compounds from higher plants and animals; biochemical studies (such as biosyntheses); fermentation and plant tissue culture; the isolation, structure elucidation, and chemical syntheses of new compounds from nature; and the pharmacology of compounds of natural origin. Each issue contains from 10 to 12 scientific papers, several "notes" (brief communications), and book reviews. Abstracts of the papers of the society's meetings are included from time to time.

852. **Journal of Parenteral Science and Technology.** Philadelphia, PA: Parenteral Drug Association, 1946-. Bimonthly. \$40.00. ISSN 0279-7976.

Earlier titles of this publication were *Bulletin of the Parenteral Drug Association* and *Journal of the Parenteral Drug Association*. It publishes original research reports and review articles in the area of parenteral science. There are about ten articles per issue, which deal with the science and technology of parenteral products.

853. **Journal of Pharmaceutical and Biomedical Analysis.** Oxford, England: Pergamon Press, 1983-. Quarterly. \$60.00. ISSN 0731-7085.

Called an "International Journal on all Drug-Related Topics in Pharmaceutical, Biomedical and Clinical Analysis," this publication is a medium for the publication of original research papers, review articles, and short communications on all aspects of the subjects. Special attention is given to analytic instrumentation and methodology; developments in computation and interpretation; drug analysis in pharmaceutical, clinical, and forensic fields; drug stability studies, pharmacokinetics, therapeutic monitoring, and metabolic profiling; quality assurance of pharmaceuticals; and drug-related aspects of industrial health and safety.

854. **Journal of Pharmaceutical Sciences.** Washington, DC: American Pharmaceutical Association, Volume 50, 1961-. Monthly. \$75.00. ISSN 0022-3549.

Formerly called *Journal of the American Pharmaceutical Association, Scientific Edition* (1940-1960), this journal had a forerunner prior to 1940, the *Journal of the American Pharmaceutical Association* (1912-1939). It publishes high-quality research articles (reports of original research) in the pharmaceutical sciences. Also included are notes, which are shorter research reports, short communications that report new findings of importance, and commentaries for Open Forum pages. Book reviews are also included.

855. **Journal de Pharmacie de Belgique.** Paris, France: Masson, 1919; New Series 1945-. Bimonthly. \$79.00. ISSN 0047-2166.

This is an official publication of the Société Belge des Sciences Pharmaceutiques. It contains original papers, reviews, laboratory notes, book reviews, and meeting notices. Articles are in French or English with abstracts in English, French, and Dutch. Monographic supplements accompany some numbers.

856. **Journal of Pharmacobio-Dynamics.** Tokyo, Japan: Pharmaceutical Society of Japan (12-15-501, Shibuya 2-chome, Shibuya-ku, Tokyo, 150, Japan), 1978- . Monthly. \$75.00.

The society that publishes this European-language journal hopes that it will serve the scientific world in interdisciplinary areas not covered by the *Chemical and Pharmaceutical Bulletin* (see entry 756), specifically the field of dynamic interaction between pharmaceuticals and biologic systems. Papers accepted for publication include regular articles containing definitive accounts of significant observations obtained through original work and short communications. Subjects covered include the following: structure-activity relationships, pharmacology, pharmacogenetics, drug metabolism and disposition, biopharmacy, pharmacokinetics, toxicology, experimental chemotherapy, and molecular immunology.

857. **Journal of Pharmacokinetics and Biopharmaceutics.** New York: Plenum Publishing, 1973- . Bimonthly. \$150.00. ISSN 0090-466X.

This publication is devoted to illustrating the importance of pharmacokinetic and biopharmaceutical applications in the understanding of drug action, design, therapy, and evaluation. It presents experimental and theoretical papers dealing with kinetics of drug disposition; clinical pharmacokinetics; time course of pharmacologic response; factors affecting formation and disposition of drug metabolism; studies in drug release from dosage forms; dosage form developments and their evaluations; bioavailability studies; and applications of computers to pharmacokinetic analysis.

Issues usually contain about five papers and some brief communications and/or scientific commentaries.

858. **Journal of Pharmacological Methods.** New York: Elsevier Science Publishers, 1978- . Monthly, except January, February, May, and December. \$190.00. ISSN 0160-5402.

The only journal devoted to pharmacologic methodology, this periodical publishes original articles dealing with new and efficient techniques of investigation in the fields of pharmacology and toxicology. Pharmacology is defined in the broadest sense, referring to actions of drugs and chemicals on all living systems. Methods such as the following are treated: radioimmunoassay techniques; photoaffinity labeling; automated monitoring devices; radiolabeled, perfused organ techniques; and computerized techniques. There are six to eight articles per issue.

859. **Journal of Pharmacology and Experimental Therapeutics.** Baltimore, MD: Published for the American Society of Pharmacology and Experimental Therapeutics by Williams & Wilkins, 1909- . Monthly. \$220.00. ISSN 0022-3565.

One of the leading journals in the field of pharmacology, this periodical publishes original papers dealing with the interactions of chemicals with biologic systems. All aspects of pharmacology and therapeutics are covered, including such areas as autonomic pharmacology, analgesia, behavioral pharmacology, cardiovascular pharmacology, cellular pharmacology, chemotherapy, clinical pharmacology, developmental pharmacology, drug abuse, drug metabolism and disposition, gastrointestinal pharmacology, immunopharmacology, neuropharmacology, pulmonary pharmacology, renal pharmacology, and toxicology. Each issue contains about 45 articles.

860. **Journal of Pharmacy and Pharmacology.** London, England: Pharmaceutical Society of Great Britain, 1949- . Monthly. £65.00. ISSN 0022-3573.

Formerly entitled *Quarterly Journal of Pharmacy and Pharmacology*, this publication reviews and reports original research in those sciences that contribute to the development and evaluation of medicinal sciences. These include biochemistry, chemistry, microbiology, pharmaceuticals, pharmacognosy, pharmacology, and toxicology. Short papers and topics of immediate interest requiring rapid publication are published as communications or letters to the editor.

861. **Journal of Pharmacy Technology.** Cincinnati, OH: Drug Intelligence and Clinical Pharmacy, 1985- . Bimonthly. \$70.00. ISSN 8755-1225.

An official publication of the Association of Pharmacy Technicians, this journal reports the latest information and developments in pharmacy technology. Its objective is to keep pharmacy technicians up to date. It contains practical articles on such topics as new drug profiles, drug therapy, education and training, legal dilemmas, role clarification, drug distribution, drug administration, and enteral and parenteral therapy.

862. **Journal of Psychoactive Drugs: A Multidisciplinary Forum.** San Francisco, CA: Haight-Ashbury Publications in association with Haight-Ashbury Free Medical Clinic (409 Clayton St., San Francisco, CA 94117), 1967- . Quarterly. \$50.00. ISSN 0279-1072.

Formerly called the *Journal of Psychedelic Drugs*, the goal of this journal when established was said to be to provide a method of dissemination of honest, objective drug information and to alert workers in the field to the rapidly changing drug abuse pattern that developed in the Haight-Ashbury district of San Francisco and spread to other parts of the country. In later issues emphasis was on special themes and what was called the "politics of drug abuse." More recently still, the increasing research on drug abuse encouraged the expansion of the journal, and there have been a number of theme issues, for instance, an issue on sexologic aspects of substance use and abuse and one on cocaine smoking. A wide variety of articles are accepted for publication. There are critical and historical reviews, theoretical analyses, speculative papers with a systematic focus, and a limited number of reports of research. Overly technical articles, however, are usually not published.

The journal has gained respectability since its inception; the editorial review board includes some noted authorities in the field.

863. **Journal of Receptor Research.** New York: Marcel Dekker, 1980- . Seven issues per year. \$150.00. ISSN 0197-5110.

The aim of this publication is to provide a forum for publication of laboratory and clinical research in biologic receptors. It presents papers on all aspects of cell surface, cytoplasmic, and nuclear receptors for drugs; hormones; immunologically active ligands; growth factors; toxins; lectins; viruses; protozoans and other cells; and the properties of the receptors, including their interactions and normal responses. It also covers the field of receptor pathobiology and the role of receptors in the diagnosis and therapy of disease. Categories for manuscripts include invited reviews, full papers, brief communications, and rapid communications.

864. **Journal of Social and Administrative Pharmacy.** Stockholm, Sweden: Swedish Pharmaceutical Press (P.O. Box 1136, S-11181, Stockholm, Sweden), 1983-. Quarterly. \$22.00.

This rather new journal is designed to cover fundamental aspects of the practice of pharmacy, whether in pharmacies, industry, universities, or administration. It includes original scientific reports and comprehensive review articles on all aspects of research in the field of social and administrative pharmacy. The language is English, and many of the contributors are Americans.

Some of the topics covered include the role of the profession in the health care system; the structure and functioning of the drug supply system; social and behavioral aspects of prescribing, consumer drug use, and misuse; drug utilization studies; pharmaceutical economics; the sociology of the field; drug information and counseling; ethical issues; public opinion creating; and historical development and futurologic forecasts of the preceding topics.

865. **Journal of Steroid Biochemistry.** Oxford, England: Pergamon Press, 1969-. Monthly. \$365.00. ISSN 0022-4731.

This journal publishes papers dealing with new experimental or theoretical developments in areas related to steroids. Subjects covered include receptors and mechanisms of action of steroid hormones and related polypeptides and proteins such as ACTH, angiotensin, FSH, LH, chorionic gonadotropin-releasing hormones, and prostaglandins; biosynthesis and metabolism of steroids, including clinical investigations dealing with steroid biochemistry; methodologic advances in the detection and measurement of steroids; structure, physicochemical, and chemical properties of steroids of biologic interest; steroid hormones in development and differentiation, comparative endocrinology of steroids; biochemical and physiologic effects of steroid action; and microbiologic transformation of steroids. Also included are short communications and preliminary notes. English, French, or German papers are acceptable for publication.

866. **Journal of Studies on Alcohol.** New Brunswick, NJ: Center for Alcohol Studies, Rutgers University, by Alcohol Research Documentation (mailing address: P.O. Box 969, Piscataway, NJ 08854), 1940-. Bimonthly. \$75.00.

Before 1975 this publication, a leading journal in the field, was called *Quarterly Journal of Studies on Alcohol, Parts A and B*. It publishes original research reports that contribute to the fundamental knowledge about alcohol, its use and misuse, and its biomedical, behavioral, and sociocultural effects. Both scientific and theoretical aspects of the subject are covered. Issues typically contain about ten articles, a section of three or four brief reports, book reviews, and perhaps announcements of future events. The following kinds of articles are accepted for publication: original studies, rapid communications, brief reports, and reviews and theoretical articles.

867. **Journal of Toxicological Sciences: Official Publication of the Japanese Society of Toxicological Sciences.** Tokyo, Japan: Japanese Society of Toxicological Sciences, 1976-. Quarterly. ISSN 0388-1350.

This journal publishes invited papers and original articles in English or Japanese with summaries in English. It also publishes proceedings of the society, and some supplements are issued.

868. **Journal of Toxicology: Clinical Toxicology.** New York: Marcel Dekker, 1968- . Monthly. \$195.00. ISSN 0731-3810.

This is one section of a three-part journal, the other parts being *Journal of Toxicology: Cutaneous and Ocular Toxicology* and *Journal of Toxicology: Toxin Reviews*. From 1968 to 1981 the section under review was called merely *Clinical Toxicology*.

The journal correlates the various disciplines that deal directly with and contribute to practical aspects of poisoning. There are usually eight to ten original papers in each issue, and special issues on important areas of the subject are published from time to time.

869. **Journal of Toxicology and Environmental Health.** Washington, DC: Hemisphere Publishing, 1976- . Monthly, except April, August, and December. \$250.00. ISSN 0098-4108.

This journal publishes editorials, reviews, book reviews, and announcements in addition to regular original research articles. Emphasis is on the toxicologic effects of natural and anthropogenic environmental pollutants and their action on intact organisms as well as in vitro systems. Fields of special interest are carcinogenesis, mutagenesis, teratology, neurotoxicity, environmental factors affecting health, and other toxicologic phenomena. Recently, greater emphasis has been placed on human health in the workplace.

870. **Lawrence Review of Natural Products.** Collegeville, PA: Pharmaceutical Information Associates (P.O. Box 186, Collegeville, PA 19426), ca. 1980- . Semimonthly. \$18.00. ISSN 0734-4961.

In newsletter format this publication presents material condensed from journals, news releases, and the like. It reviews natural products, reports of intoxications, and natural public health problems.

871. **Manufacturing Chemist: The Journal for the Chemical Industry.** London, England: Morgan-Grampion, 1930- . Monthly. \$110.00. ISSN 0262-4230.

This is an international publication for the cosmetic, toiletry, chemical, pharmaceutical, and allied industries. It provides a wide range of coverage, including news, market information, and articles on technical developments. Developments in production, processing, packaging, distribution, and marketing are all included. In addition, there are special surveys of new chemical products and the financial performance of the top chemical companies. It is an attractive journal, printed on slick paper and including colored ads.

872. **The Medical Letter on Drugs and Therapeutics.** New Rochelle, NY: The Medical Letter, 1959- . Biweekly. \$27.50. ISSN 0025-732X.

This newsletter, usually four pages in length, provides reviews or abstracts of material from the literature. It provides conclusions that sum up findings about drugs. A good deal is included about adverse effects. The newsletter has reference value because it is indexed.

873. **Medical Marketing and Media.** Boca Raton, FL: CPS Communications, 1966- . Monthly. \$35.00. ISSN 0025-7354.

Formerly called *Pharmaceutical Marketing and Media*, this publication covers drug trade and marketing. There are four or five articles per issue, and columns include Washington Update; Business Notes; New Products Briefs; and Industry Reports. News of people is included also, as are notices of awards and meetings.

874. **Medicinal Research Reviews.** New York: John Wiley & Sons, 1981- . Quarterly. \$65.00. ISSN 0198-6325.

A review publication, this journal covers all aspects of research involving the study of disease states and the consequent development of therapeutic agents. It features developments in specific areas of medical research with a review of the history leading up to the introduction of a new pharmaceutical, thus providing insights into drug discovery. There are about four articles per issue.

875. **Molecular Pharmacology: An International Journal.** Baltimore, MD: American Society of Pharmacology and Experimental Therapeutics, 1965- . Monthly. \$165.00. ISSN 0026-895X.

For those who are interested in receptors and neurotransmitters, drug metabolism, and antibiotic and anticancer drug actions, this journal publishes the results of investigations that contribute significant new information on drug action or selective toxicity at the molecular level. The term "drug" is defined broadly to include chemicals that selectively modify biologic function. Papers published are those that describe applications of the methods of biochemistry, biophysics, genetics, and molecular biology to problems in pharmacology or toxicology.

876. **NABP Newsletter.** Chicago, IL: National Association of Boards of Pharmacy, 1971- . Ten times per year. \$15.00. ISSN 0027-5700.

Continuing the *NABP Quarterly*, this newsletter is intended to educate, inform, and communicate the objectives and programs of the National Association of Boards of Pharmacy and its member boards to the profession and the public. The information provided includes news from headquarters and Washington, updates on events and people, book lists, association business, and conference reports.

877. **NARD Newsletter: Washington Voice of the Independent Pharmacist.** Alexandria, VA: National Association of Retail Druggists (has the same volume numbering as the *NARD Journal*; see entry 878). Monthly. \$50.00. ISSN 0162-1602.

This newsletter carries the heading "Ask Your Family Pharmacist" on each issue. Material presented includes association and national news and news of people. Food and Drug Administration recalls are listed in each issue.

878. National Association of Retail Druggists. **NARD Journal.** Alexandria, VA: National Association of Retail Druggists, Volume 19, 1915- . Monthly. \$50.00. ISSN 0276-2595.

Called "The Voice of the Independent Pharmacist," this is the official journal of the National Association of Retail Druggists. It is an attractive publication, printed on slick paper with many colored ads. Included are short articles and news and convention reports.

879. **National Pharmaceutical Association Journal.** Washington, DC: National Pharmaceutical Association (P.O. Box 934, Howard University, Washington, DC 20059), Volume 17, 1970-. Three times per year. \$15.00. ISSN 0027-9897.

An official publication of the association, this journal contains news, association business, and articles concerning the practice of pharmacy, including management, research, and clinical aspects. Emphasis is on minority and related health concerns.

880. **Natural Products Reports: A Journal of Current Developments in Bio-Organic Chemistry.** London, England: Royal Society of Chemistry, 1984-. Bimonthly. \$240.00. ISSN 0265-0568.

This relatively new journal reviews recent developments in natural product chemistry that were previously covered by the discontinued Specialist Periodical Reports entitled *The Alkaloids, Biosynthesis, Terpenoids and Steroids*, and *Aliphatic and Related Natural Chemistry* (see entries 59, 81). The reports consist of critical reviews written by experts, and the coverage has been expanded to include such areas as chemotaxonomy, enzymology, biosynthetic aspects of biotechnology, and advances in physical techniques used for structure determination.

Each issue of the journal includes six or seven articles, and there are author and subject indices (cumulated annually) to facilitate the location of articles dealing with specific areas.

881. **Naunyn-Schmiedeberg's Archives of Pharmacology.** Heidelberg, Germany: Springer-Verlag, 1873-. 12 issues per year. \$445.00. ISSN 0028-1298.

An organ of the Deutsche Pharmakologische Gesellschaft, this periodical has had various titles over the years. It presents, in English, highly scientific articles and a few short communications in the combined fields of pharmacology and toxicology. There are original reports on the progress being made by pharmacologists, including detailed explanations of experimental results. Supplementary issues are published supplying abstracts from meetings of distinguished European societies. Each issue usually contains about 12 articles.

882. **Neurobehavioral Toxicology and Teratology.** Fayetteville, NY: ANKHO Internationa, Volume 3, 1981-. Bimonthly. \$190.00. ISSN 0275-1380.

Continuing an earlier publication called *Neurobehavioral Toxicology*, this journal publishes original reports of systematic studies in the areas of neurotoxicology and teratology in which the primary emphasis and theoretical context are on the nervous system and behavior. It also includes brief communications that describe a new method, technique or apparatus, and results of experiments that can be reported briefly. Behavioral studies are not published unless they make a significant contribution to neurotoxicology or teratology. A limited number of relevant reviews and theoretical articles, results of symposia, and more comprehensive studies are published as monograph supplements.

883. **Neuropharmacology.** Oxford, England: Pergamon Press, 1962-. Monthly. \$330.00. ISSN 0028-3908.

Neuropharmacology publishes original research articles and preliminary notes concerned with the actions of drugs and other substances on the central and peripheral nervous systems in animals and man. Its intent is to further the understanding of the

mechanisms of drug action on the nervous system and to facilitate communications among the different scientific disciplines and between basic science and clinical investigation. Areas covered include molecular pharmacology, electrophysiologic pharmacology, cytochemical neuropharmacology, and behavioral pharmacology and psychopharmacology. There are about 15 articles and six to eight preliminary notes in each issue.

The title of the journal formerly was *International Journal of Neuropharmacology*.

884. **The New Pharmacist.** Washington, DC: American Pharmaceutical Association, 1984-. Quarterly. Part of annual membership dues of the association.

Intended for new members of the association, this newsletter includes short items of interest to recent pharmacy graduates.

885. **PR: Pharmaceutical Representative.** Northfield, IL: McKnight Medical Communications (550 Frontage Rd., Northfield, IL 60093), 1971-. Monthly. \$18.00. ISSN 0161-8415.

Said to be "the only magazine designed solely for the pharmaceutical representative," this tabloid-sized publication continues *Pharmaceutical Salesman*. It contains news, including news about people, short articles, forecasts, and information about new devices.

886. **Perfumer and Flavorist.** Wheaton, IL: Allured Publishing, 1976-. Bimonthly. \$50.00. ISSN 0361-8587.

This publication partially supersedes *Cosmetics and Perfumery*. Each issue usually contains about seven scientific articles, a calendar of events, and news, especially about industry people. Worldwide sources of materials are listed in a special section.

887. **Perspectives in Clinical Pharmacology.** New York: Elsevier Science Publishers, 1983-. Monthly. \$60.00. ISSN 0737-2914.

A newsletter intended for clinical pharmacologists, hospital pharmacists, and drug development scientists, this publication integrates recent work in pharmacology, new agents, advances in biomedical research, and clinical applications. Each issue presents one main topic and one or two short features. Areas covered include principles of pharmacokinetics, drug disposition, and therapeutics of individual drugs, drug classes, and disease entities. Also included is practical information on drug administration, dosage prediction, and therapeutic response.

888. **Pharmaceutica Acta Helvetiae.** Zurich, Switzerland: Schweizerische Apothekerzeitung, 1926-. Monthly. ISSN 0031-6865.

Articles in this journal are published in German, French, or English and have English summaries. There are about six original research articles per issue. Book reviews are included.

889. **Pharmaceutical Engineering: The Official Journal of the International Society of Pharmaceutical Engineers.** Tampa, FL: International Society of Pharmaceutical Engineers, 1980-. Bimonthly. \$20.00. ISSN 0273-8139.

Intended primarily for those in the pharmaceutical industry, especially engineers, this publication includes in each issue about four articles, several features such as meeting notices and editorials, and also letters to the editor, Washington news, new product information, and many ads.

890. **Pharmaceutical Executive.** Springfield, OR: Aster Publishing, 1981-. Monthly. \$51.00. ISSN 0279-6570.

A business and marketing publication for pharmaceutical industry executives, this journal publishes articles, editorials, letters to the editor, meeting notices, news (including that from Washington), information on health care, and many ads (some in color).

891. **Pharmaceutical Journal.** London, England: Pharmaceutical Society of Great Britain, 1841-. Weekly. £46.60. ISSN 0031-6873.

Intended primarily for the British pharmacist, this is an official journal of the Pharmaceutical Society of Great Britain. It publishes a variety of useful materials, including editorials, official news, current affairs, a section for the clinical pharmacist, professional society news, information about people, a scientific and technical section, future events, book reviews, a history of pharmacy section, business and management information, and a products and services section.

892. **Pharmaceutical Manufacturing: Applied Technology for Process Engineering, Production QA and R & D.** Santa Monica, CA: Canon Communications, 1984-. Monthly. \$18.00. ISSN 0745-0990.

Devoted to applied technologies in the development and production of finished pharmaceuticals, biologics, and in vivo diagnostics, this journal is an expanded outgrowth of an earlier title, *Particulate and Microbial Control*. It provides information on bulk chemicals, raw materials, and ingredients, machinery and equipment, instrumentation, and packaging, in addition to microbiology, filtration, sterilization, and particle control. Industry news and a calendar of events are included in each issue.

The journal is intended for scientists, technical operating managers, and administrators in pharmaceutical and allied industries.

893. **Pharmaceutical Medicine.** Basingstoke, Hampshire, U.K.: Scientific and Medical Division, Macmillan Press, 1985-. Quarterly. \$95.00.

A communications medium for scientists, researchers, and clinicians, this new journal provides a forum for discussion of the strengths and weaknesses of the methods employed in testing the effectiveness of new drugs in humans. It publishes abstracts of papers that have appeared elsewhere and that cover methodology, promotes the discipline of pharmaceutical medicine internationally, and reemphasizes that the responsibility of pharmaceutical medicine is the care and well-being of mankind.

Included are invited contributions, reviews, news, opinion, book reviews, and a calendar of events. The intended audience includes those in the pharmaceutical industry, government agencies, universities, and hospitals who share responsibility for the development and evaluation of drugs both before and after marketing.

894. **Pharmaceutical News Capsule.** Newtown, PA: Scott-Levin Associates (Rawaha Professional Bldg., 258 South State St., Newtown, PA 18940), 1984- . Bimonthly. \$125.00.

This publication reviews, summarizes, analyzes, and provides editorial commentary on issues and trends affecting the pharmaceutical industry. The intent is to cover happenings in the health care industry and their potential impact on the various business sectors. More than 75 publications (including medical journals and newsletters, drugstore trade journals, pharmaceutical industry trade publications, government publications, business periodicals, and lay press) are reviewed.

895. **Pharmaceutical Research: Journal of the Pharmaceutical-Biomedical Sciences.** Stuttgart, Germany: Georg Thieme Verlag, 1983- . Bimonthly. \$79.00. ISSN 0739-0742.

Focusing on the important advances taking place in the pharmaceutical sciences, this journal includes original research articles, editorial comments, research and government highlights and also includes book reviews and a personnel placement section. A wide range of scientific areas are covered, including site-specific (target) drug delivery; biopharmaceutics; drug metabolism and pharmacokinetics; physicochemical aspects of drug interaction with pharmaceutical and biologic macromolecules; medicinal chemistry; mechanisms of drug action; chemical toxicology; new natural products; and new techniques and principles in drug analysis.

896. **Pharmaceutical Technology.** Springfield, OR: Aster Publishing, 1977- . Monthly. \$49.00. ISSN 0147-8087.

Each issue of this periodical presents three or four articles of interest to those in the manufacturing pharmacy area. Also included are many ads and departments such as editorials, reports from Washington, current technical literature, book reviews, news, new products, packaging information, and meeting notices.

The July issue is a buyers guide that lists chemical raw materials, pharmaceutical ingredients, manufacturing equipment and supplies, packaging materials, and laboratory instruments.

897. **Pharmaceutisch Weekblad.** Utrecht, The Netherlands: Bohn, Scheltema, and Holkema, Volume 91, 1955- . Weekly. ISSN 0031-6911.

Pharmaceutisch Weekblad is the official journal of the Royal Dutch Association for Advancement of Pharmacy. It continues *Pharmaceutisch Weekblad voor Nederland*. The articles are in Dutch with English abstracts. Each issue contains several articles and includes information on new drugs.

898. **Pharmaceutisch Weekblad. Scientific Edition. Netherlands' Archives of Pharmaceutical Sciences.** Utrecht, The Netherlands: Bohn, Scheltema, and Holkema, 1979- . Bimonthly. Dfl. 70.- . ISSN 0167-6555.

The scientific edition of *Pharmaceutisch Weekblad* is published in English and contains articles of original research covering all areas of the pharmaceutical sciences. Each issue contains about four original articles, short communications, abstracts of Dutch Ph.D. theses, and occasionally review articles and abstracts of meeting papers.

899. **Pharmacological Research Communications.** London, England: Academic Press for the Italian Pharmacological Society, 1969- . Monthly. \$182.80. ISSN 0031-6989.

An international journal in English, this publication supersedes *Archivo Italiano di Farmacologia*. It is a rapid-publication journal containing research papers grouped under headings such as biochemical pharmacology, cardiovascular and renal pharmacology, and clinical pharmacology. Each article is summarized. There are seven or eight articles per issue covering basic and applied pharmacologic research involving animals or humans.

900. **Pharmacological Reviews.** Baltimore, MD: Williams & Wilkins, 1949- . Quarterly. \$70.00. ISSN 0031-6997.

Published for the American Society for Pharmacology and Experimental Therapeutics with the joint editorial supervision of the British Pharmacological Society and the Scandinavian Pharmacological Societies, this journal covers pharmacology, experimental therapeutics, toxicology, and chemotherapy. The review articles published have included such topics as biochemical and cellular pharmacy, drug metabolism and disposition, renal pharmacology, neuropharmacology, behavioral pharmacology, clinical pharmacology, and toxicology.

901. **The Pharmacologist.** Bethesda, MD: American Society for Pharmacology and Experimental Therapeutics, 1959- . Quarterly. \$20.00. ISSN 0031-7004.

The primary purpose of this journal is to keep society members informed about society affairs and other matters of professional interest. It is also a medium for the publication of abstracts of papers to be presented at August meetings of the society.

902. **Pharmacology, Biochemistry, and Behavior.** Fayetteville, NY: ANKHO International, 1973- . Monthly. \$445.00. ISSN 0091-3057.

Included in this publication are original reports of systemic studies in the areas of pharmacology, biochemistry, and toxicology in which the primary emphasis and theoretical context are behavioral. Also included are brief communications that describe a new method, technique, or apparatus and results of experiments that can be reported briefly. Behavioral studies are published only if they make a contribution to pharmacology, biochemistry, or toxicology. A limited number of reviews and theoretical studies, results of symposia, and comprehensive studies as monograph supplements are also published. There are about 25 articles per issue.

903. **Pharmacology: International Journal of Experimental and Clinical Pharmacology.** Basel, Switzerland: S. Karger, 1968- . Monthly. \$282.00. ISSN 0031-7012.

This international journal publishes original papers and short communications in English. There are eight or nine articles per issue.

904. **Pharmacology and Therapeutics.** Oxford, England: Pergamon Press, 1975- . 12 times per year. \$800.00. ISSN 0163-7258.

Called "The Journal of the International Encyclopedia of Pharmacology and Therapeutics," this publication presents articles that are critical and authoritative reviews of currently important topics in pharmacology, including chemotherapy, toxicology, metabolic inhibitors, clinical pharmacology and therapeutics, and general

and systemic pharmacology. The articles are usually specially commissioned, but uninvited review papers are sometimes published. When a number of papers covering a certain topic have been published, they are reappraised, perhaps updated, and published in a volume of the *International Encyclopedia of Pharmacology and Therapeutics* (entry 104).

Prior to 1979 the journal was published in three sections, A-C.

905. Pharmacopeial Forum: The Journal of Drug Standards Development and Official Compendia Revision. Rockville, MD: United States Pharmacopeial Convention, 1975-. Bimonthly. \$85.00 per year. ISSN 0363-4655.

The United States Pharmacopeia Convention, the publisher of this periodical, is made up of representatives from colleges and national and state organizations of medicine and pharmacy. It also publishes the *United States Pharmacopeia and National Formulary* (see entry 98), the official, or legally recognized, compendia of standards for drugs.

The *Pharmacopeial Forum* provides details of drug standards development and official compendia revisions. It shows in-process revisions and provides interim revision announcements. This is important for those who wish to keep the USP-NF current. The publication also contains suitable articles pertinent to drug standardization.

906. Pharmacopsychiatry. Stuttgart, Germany: Georg Thieme Verlag, Volume 17, 1984-. Six times per year. \$81.00. ISSN 0720-4208.

Earlier titles of this journal were *Pharmacopsychiatrie-Neuropsychopharmacologie* (1968-1980), and *Pharmacopsychiatria* (1981-1983). It covers clinical pharmacology, psychiatry, psychology, and neurophysiology. Its main objective is to further the field of pharmacopsychiatry. Although the presentations are usually in English now, special emphasis is on papers originating in Europe. There are original papers and editorials, governmental highlights, and some meeting proceedings and announcements. German summaries accompany the six or seven articles per issue.

907. Pharmacotherapy: The Journal of Human Pharmacology and Drug Therapy. Carlisle, MA: Pharmacotherapy Publications, 1981-. Bimonthly. \$85.00. ISSN 0277-0008.

A comprehensive source of information on new drugs and drug therapy, this journal provides in-depth information, including timely drug evaluations, new indications, therapeutic reviews, drugs in perspective, and clinical research articles. It critically reviews drugs at the time of the U.S. market introduction.

The publishers of the journal also make available in monograph form all of the journal's new drug reviews pertinent to selected specialties.

908. Pharmacy in History. Madison, WI: American Institute of the History of Pharmacy, Volume 4, 1959-. Quarterly. \$4.50 per issue or \$25.00 per year. ISSN 9931-7047.

This periodical continues a small publication called *A.I.H.P. Notes*. Articles of historical interest are published with many interesting illustrations. Also included are news items, book reviews, and some information about the publishing organization.

909. **Pharmacy International.** Amsterdam, The Netherlands: Elsevier Science Publishers, 1980-. Monthly. \$48.00. ISSN 0167-3157.

Intended mainly for pharmacists in industry, universities, hospitals, and academic institutions, this publication provides coverage of new drugs, formulation and design, drug reactions and interactions, pharmacokinetics and biopharmaceutics, drug therapy, and pharmacy practice. There are three types of material published: (1) Trend reviews; (2) News and comments, including briefings on new drugs, reactions, interactions, news of research and conferences, reviews of recent publications, and synopses of social, economic, regulatory, and political issues; and (3) Abstracts of important papers from key research journals in pharmacy and from a few general medical journals.

An annual library compendium is produced, bound in hard covers, including the material from the regular edition.

910. **Pharmacy Times.** Port Washington, NY: Romaine Pierson Publishers, Volume 5, 1969-. Monthly. \$26.00. ISSN 0096-0349.

Pharmacy Times continues an earlier journal *American Professional Pharmacist* and some other titles. It is devoted to professional pharmacy, pharmacy economics, and prescription practice. There are short articles of practical value, letters, editorials, a pharmacy law section, a hospital pharmacy section, news, and continuing education material. The journal is intended for retail, hospital, nursing home, and academic pharmacists.

911. **Die Pharmazeutische Industrie.** Aulendorf, Germany: Edition Cantor, Verlag für Medizin und Naturwissenschaften GmbH, 1933-. Monthly. DM 240. ISSN 0031-711X.

Published in German and English with summaries of the articles given in both languages, this journal contains scientific articles and much other information of interest to the pharmaceutical industry. Technical information and information about the industry are included as well as book reviews.

912. **Pharmazeutische Zeitung: Apotheker-Zeitung.** Frankfurt, Germany: Bundesvereinigung Deutscher Apothekerverbände, Volume 118, 1973-. Weekly. DM 148.40. ISSN 0031-7136.

Called "Zentralorgan für die Apotheker der Bundesrepublik Deutschland Gegründet 1856," the title of this journal has varied over the years. It contains important articles, news of people, drug information, and book reviews.

913. **Die Pharmazie: Organ der Pharmazeutischen Gesellschaft der Deutschen Demokratischen Republic.** Berlin, East Germany: Verlag Volk und Gesundheit. 1946-. Monthly. M 168. ISSN 0031-7144.

The text of the journal is in English and German with summaries in English. It publishes surveys, papers on experimental work, accounts of experience obtained with the use of drugs, material for continuing education, reports of congresses, and book reviews. Subjects covered include synthesis and analysis of active principles and pharmaceutical preparations, pharmaceutical technology, biopharmaceutics, experimental and clinical pharmacology, research in medicinal plants, and history of pharmaceutics.

914. **Phytochemistry: An International Journal of Plant Biochemistry.** Oxford, England: Pergamon Press, 1961-. Monthly. \$420.00. ISSN 0031-9422.

The intention of this highly scientific journal is to cover all aspects of pure and applied plant biochemistry, especially those that elucidate factors underlying the growth, development, and differentiation of plants and the chemistry of plant products.

The contents is grouped in sections as follows: biochemistry, biosynthesis, chemotaxonomy, phytochemistry, and short reports. An attempt is made to group together papers of like subjects. A substantial number of papers appear in each issue; issues often contain nearly 200 pages. Book reviews are included.

915. **Planta Medica: Journal of Medicinal Plant Research.** Stuttgart, Germany: Hippokrates Verlag (Neckarstrasse 121, 7000 Stuttgart 1, Germany), 1953-. Bimonthly. \$145.00 per year.

This research-level journal publishes original articles, short communications, and reviews that contribute to the following fields of medicinal plant research and application: phytochemistry and chemistry of natural products, pharmacognosy, plant biochemistry, biology of medicinal plants, and pharmacology. The editors prefer that manuscripts be submitted in English but will also accept German and French articles. If the article is not in English, titles and abstracts are provided in English.

Each issue typically contains 10-12 research articles, a few short communications, and perhaps one review article. The journal occasionally publishes abstracts of papers of meetings such as the International Research Congress on Natural Products as Medicinal Agents. The journal is the official organ of the Gesellschaft für Arzneipflanzenforschung.

916. **Product Marketing for Beauty Industry Retailers and Manufacturers.** New York: U.S. Business Press, Volume 13, 1984-. \$35.00. ISSN 0278-1530.

This tabloid-sized journal supersedes *Drug Trade News* and has had other titles such as *Product Management*, *Product Marketing*, *Product Marketing and Cosmetic and Fragrance Retailing*, and *Product Marketing, Cosmetic and Fragrance Marketing*. It publishes news items, including news of people, marketing information, product and promotion information, media notes, and ads, some in color.

917. **Progress in Neuro-Psychopharmacology and Biological Psychiatry: An International Research and Review Journal.** Elmsford, NY: Pergamon Press, 1977-. Six issues per year. \$155.00. ISSN 0278-5846.

Formerly called *Progress in Neuro-Psychopharmacology*, this journal provides an interdisciplinary medium for the rapid publication of original research papers and review articles dealing with experimental, clinical, and social aspects of neuropsychopharmacology. One of the main purposes of the journal is to allow exchanges and communications between members of the neuropsychopharmacologic community. The original contributions published deal mainly with the mechanisms and site of action of neuropsychotropic drugs.

918. **Prostaglandins.** Los Altos, CA: Geron-X Publishers, 1971-. Monthly. \$130.00. ISSN 0090-6980.

Prostaglandins publishes papers and minireviews encompassing all areas of research in the field. Each issue presents about 15 papers.

919. **Psychopharmacology.** New York: Springer-Verlag, 1979- . Monthly. \$679.00 per year.

Formerly called *Psychopharmacologia*, this research-level journal is broad in scope and includes some material on drug abuse. It provides a medium for the publication of scientific articles concerned with the analysis and synthesis of the effects of drugs on behavior in a broad sense of the term. Some contributions are of a clinical nature; some deal with specialized investigations in the fields of experimental psychology, neurophysiology, neurochemistry, general pharmacology, and related areas. The articles, which are published in English, French, or German, are of three types: original investigations, short reports, and review articles.

920. **Psychopharmacology Bulletin.** Rockville, MD: U.S. National Institute of Mental Health, 1959- . Quarterly. \$19.00 per year.

This journal is prepared by the International Reference Center on Psychotropic Drugs, Psychopharmacology Research Branch of the National Institute of Mental Health. Its purpose is to facilitate the dissemination and exchange of information among the national and international scientific communities. Emphasis is on rapid, informal reporting of work not yet reported in more formal literature. Review articles, letters to the editor, news items, and announcements are published. Included in the announcements are reviews of publications and information about meetings. Recurring bibliographies generated by computer are included in each issue as an alerting service. There are both author and subject indexes. Special issues are occasionally published.

921. **Qualitas Plantarum: Plant Foods for Human Nutrition.** The Hague, The Netherlands: W. Junk (P.O. Box 13713, 2501 ES, The Hague, The Netherlands), 1952- . Four times per year.

This scientific publication has had other titles. Volume 1 was called *Materia Vegetabiles*, and from 1953 to 1973 the title was *Qualitas Plantarum et Materia Vegetabiles*. It is the official organ of the Confoederation Internationales ad Qualitates Plantarum Edulium Perquirendas and the Deutsche Gesellschaft für Qualitätsforschung (Pflanzliche Nahrungsmittel). It deals with the quality of food plants in terms of nutrition and health as influenced by genetics, ecology, plant nutrition, plant protection (pesticides and herbicides), growth regulators, management of soil and water supply, cooking, and processing. Also included are "topics of biochemistry, physiology, clinical and toxicological trials, and epidemiological surveys as far as plant food is concerned." Articles are in English, French, or German with summaries in English for articles in a foreign language.

Issues may present meeting papers and be devoted to single special topics. The role of plant foods in preventive medicine was recently covered.

922. **Quality Control Reports: The "Gold Sheet."** Chevy Chase, MD: FDC Reports. Monthly. \$70.00.

The "Gold Sheet" is for executives who are concerned with quality assurance and quality control procedures in the prescription and over-the-counter pharmaceutical, cosmetics, and medical device industries. Covered are developments in U.S. Food and Drug Administration regulations governing the manufacturing and processing of health care products and state-of-the-art production and quality techniques.

923. **Rational Drug Therapy.** Bethesda, MD: American Society for Pharmacology and Experimental Therapeutics, 1967- . Monthly. \$12.00. ISSN 0031-7020.

This newsletter continues an earlier publication, *Pharmacology for Physicians*. Each issue focuses on a particular drug. A review of it is presented with "Recommended Readings."

924. **Reactions: Current Reports on Drug Reactions, Interactions, Overdose, Poisoning, Abuse and Dependence.** Newton, PA: ADIS Press International, 1980- . 22 issues per year. \$195.00. ISSN 0157-7271.

Reactions is a rapid drug-reporting service intended primarily for drug company personnel and for clinical specialists. It contains summaries of previously published reports on adverse reactions, drug abuse, drug interactions, poisoning, and toxic effects. About 1500 journals are said to be monitored for information. Each issue contains a "Profile" of a drug. There are quarterly indices with an annual cumulation.

925. **Regulatory Toxicology and Pharmacology.** New York: Academic Press, 1981- . Quarterly. \$70.00. ISSN 0273-2300.

Presented in this journal are reports of important developments, public opinion, scientific data, and ideas involving scientific information and the legal aspects of toxicologic and pharmacologic regulation. Included are analyses of regulatory decisions and interpretation of scientific knowledge that influence regulatory decisions. The primary intent of the journal is to report the law to scientific, medical, administrative, legal, and other personnel in industrial and research organizations dealing mainly with pharmaceuticals, chemicals, and foods.

926. **Research Communications in Chemical Pathology and Pharmacology.** Westbury, NY: PJD Publications, 1970- . Monthly. \$140.00. ISSN 003-5164.

This unique journal combines pathology and pharmacology in terms of drugs and diseases in the many species and tissues. There are research papers and reviews on the elucidation of mechanisms of drug actions and pathogenesis in humans and other organisms of the plant and animal kingdom. Also included are papers on clinical drug trials, basic research of probable importance to diseases and drug actions, geographic and environmental pathology, ethnopharmacognosy, laboratory medicine, and biomedical techniques. The papers include the basic and clinical aspects of physiology, pharmacology, pathology, biochemistry, microbiology, immunology, and their subdivisions. There are about ten articles and a few research letters in each issue.

927. **Research Communications in Substances of Abuse: Basic and Clinical Studies on the Use and Abuse of Alcohol, Drugs and other Substances.** Westbury, NY: PJD Publications, 1980- . Quarterly. \$70.00. ISSN 0193-0818.

Intended for use by those in the basic and clinical professions as well as by research scientists and graduate students, this publication brings together material on the abuse of chemicals, drugs, and natural substances. It is devoted to the physiology, toxicology, biochemistry, pathology, pharmacology, organic and medicinal chemistry, pharmacognosy, genetics, epidemiology, psychobiology, and other related aspects of abused substances. Original reviews, papers, and research letters are published.

The original title of the journal was slightly different.

928. **Reviews in Clinical and Basic Pharmacology.** Tel-Aviv, Israel: Freund Publishing House, 1980-. Quarterly. \$95.00.

The aim of this review journal is to publish articles on all aspects of clinical and basic pharmacology. The reviews are of wide-ranging scope, including experimental and theoretical areas of the pharmacologic sciences and new developments within them. The intended audience includes pharmacologists, scientists in related areas, and physicians working in basic research, medicine, and industry.

929. **Reviews in Pure and Applied Pharmacological Sciences.** Tel-Aviv, Israel: Freund Publishing House, 1980-. Quarterly. \$90.00. ISSN 0197-2839.

The aim of this journal is to publish review articles on all aspects of pharmacology, pharmaceuticals, and medicinal chemistry. The reviews are of wide scope, including experimental and theoretical areas of the subjects and new developments within them. The intended audience includes all pharmacologists and scientists in related fields working in academia, basic research, and industry.

930. **Reviews on Drug Metabolism and Drug Interactions.** Tel-Aviv, Israel: Freund Publishing House, 1972-. Quarterly. \$95.00. ISSN 0034-2190.

This English-language journal is devoted to review articles on the mechanisms by which drugs and foreign compounds are metabolized, the mechanisms by which drugs may interact, and the pharmacologic and toxicologic consequences. The reviews are of wide-ranging scope, encompassing experimental work and developments in the field.

931. **Revue d'Histoire de la Pharmacie.** Paris, France: Société d'Histoire de la Pharmacie, 1913-. Quarterly. ISSN 0035-2349.

This nicely illustrated journal continues the *Bulletin de la Société de la Pharmacie*. It includes regular articles, proceedings of the society, short items, bibliographies, and responses to questions regarding pharmacy history.

932. **Russian Pharmacology and Toxicology Incorporating New Drug Screening Reports.** London, England: Euromed Publications, 1967-. Bimonthly. \$105.00. ISSN 0036-0325.

This translated publication continues (since Volume 41, 1978) *Russian Pharmacology and Toxicology Incorporating Chemico-Pharmaceutical Journal and New Drugs in the USSR*. It consists of selected translations from *Farmakologiya i Toksikologiya* (see entry 803), *Khimiko-Farmatsevticheskii Zhurnal*, and *Novye Lekarstvennye Preparaty*.

933. **SPC: Soap, Perfumery, and Cosmetics.** London, England: United Trade Press, 1928-. Monthly. ISSN 0037-749-X.

Since the first issue of this periodical was published in 1928 its title has varied slightly. Recent issues contain news; business, product, and marketing information; reports of meetings; short articles (some scientific); and many ads. Packaging information is also included.

Special sections are included from time to time, and recent ones have provided a directory of material suppliers, a listing of surfactants manufacturers, and a plant and packaging directory. In addition, a recent issue listed the top ten fragrances for the year.

934. **Schweizerische Apotheker-Zeitung: Journal Suisse de Pharmacie: Giornale Svizzero de Farmacia.** Bern, Switzerland: Société Suisse de Pharmacie, 1863- . Semimonthly. 110 Fr. ISSN 0036-7508.

Included in this publication are short articles suitable for practicing pharmacists, news, including information about people, meeting announcements, and book reviews. Some scientific information is included.

935. **Scientia Pharmaceutica: Wissenschaftliches Organ der Österreichischen Apothekerschaft.** Vienna, Österreichische Apotheker-Verlagsgesellschaft, 1930- . Quarterly. ISSN 0036-8709.

Scientia Pharmaceutica has in the past been issued as a supplement to several other publications. It contains review articles, original papers, conference reports, and book reviews. There are six or seven articles per issue.

936. **Soap, Cosmetics, Chemical Specialties.** New York: MacNair-Dorland, 1925- . Monthly, except semimonthly in April. \$23.00. ISSN 0091-1372.

This is an official publication of the Chemical Specialties Manufacturers Association. Former titles were *Soap and Chemical Specialties* and *Soap and Sanitary Chemicals*. The publication is intended primarily for those who are responsible for formulation, research, manufacturing, purchasing, and packaging in the fields indicated in the title. It is an attractive magazine printed on slick paper with many ads in color.

Each issue contains several feature articles, a separate packaging section, and news items. New products are discussed; laws and regulations outlined; and new equipment, new patents, and coming meetings announced. The news items usually concern the industry, including personnel changes.

The April issue each year features the "Blue Book," a reference and buyers' guide for manufacturers, especially for repackers, private labelers, and those who purchase in bulk. The first part of the "Blue Book" alphabetically lists raw materials, equipment, and services of companies in those markets. The second section includes an index of articles published in the journal during the past year, names and addresses of trade associations in the industry, and a master list of all companies whose products are shown anywhere in the "Blue Book."

The main concern of the periodical is to keep the reader abreast of the activities of the industry.

937. **Società Italiana di Farmacia Ospedaliera. Bollettino.** Milan, Italy: Edizioni Minerva Medica, 1955- . Bimonthly. \$60.00. ISSN 0037-8798.

This journal publishes, in Italian, articles, information about the society, editorials, and book reviews.

938. **Society of Cosmetic Chemists. Journal.** New York: Society of Cosmetic Chemists, 1947- . Eight issues per year. \$50.00. ISSN 0037-9832.

Through 1978 the *Journal of the British Society of Cosmetic Chemists* was issued with this journal. In 1979 the British publication began to be published separately.

The journal is a scientific publication containing papers concerning cosmetics or one of the closely related sciences. Included are original papers, review papers, technical

notes, society news, and abstracts of meeting papers. Subjects covered include new raw materials; safety, efficacy, and performance of cosmetics; new processing procedures; and dermatologic, pharmacologic, and microbiologic aspects of cosmetics.

939. **Street Pharmacologist.** Coconut Grove, FL: Up Front (P.O. Box 330589, Coconut Grove, FL 33133), 1978- . Monthly. \$20.00 per year.

The subtitle of this periodical is "Your Independent Drug Information Center." It contains news, comments, and articles related to drugs of abuse and their effects. In addition, it publishes analysis results of sample substances (presumably illicit "street" drugs) sent to the journal. In tabular form the substances are described physically, with alleged contents, actual contents, and origin of the samples. The reader is advised that he may have a substance analyzed if he will wrap a small sample of it and send \$15.00 to an address indicated. He may later call anonymously and obtain the results.

The aim of the publication is said to be "to collect and share information about drugs and health in ways to minimize problems people encounter in our chemically oriented society." Many of the contributors to the publication evidently have had firsthand experience with drugs of abuse.

The publication is included free of charge with a *Grassroots* subscription (entry 654).

940. **Substance and Alcohol Actions/Misuse: The International Research Journal for the Rapid Communications in Basic and Clinical Sciences.** Elmsford, NY: Pergamon Press, 1980- . Bimonthly. \$100.00. ISSN 0191-8877.

This is a rapid communication journal that focuses on the basic mechanisms of actions and chronic effects of psychoactive agents having the potential for abuse. Clinical as well as basic sciences are covered, including aspects related to alcohol, opiates, sedative-hypnotics (central depressants), inhalant intoxicants, central stimulants, tranquilizers, cannabis and derivatives, psychotropogens, and tobacco.

Articles published include original reports, mini- and state-of-the-art reviews, technical comments, short communications, and letters to the editor. The journal is intended for biochemists, neurochemists, pharmacologists, anatomists, physiologists, endocrinologists, pathologists, toxicologists, behavioral scientists, and psychologists in government, industry, universities, hospitals, and clinics.

941. **Therapeutic Drug Monitoring.** New York: Raven Press, 1979- . Quarterly. \$99.00. ISSN 0163-4356.

Called an "International Journal Dedicated to the Analytical and Clinical Aspects of Therapeutic Drug Monitoring," this publication covers the latest advances in the field and is an information source for clinical pharmacologists, clinical pharmacists, clinical pathologists, clinical chemists, toxicologists, analytic chemists, and the practicing physician. Original articles, reviews, case reports, editorials, technical notes, letters to the editor, continuing education material, announcements, and book reviews are included. Subject areas covered include the physiologic and pharmacologic basis of drug action, metabolism, drug interactions, and analytic techniques that are applicable in a clinical laboratory.

942. **Toiletries, Fragrances and Skin Care: "The Rose Sheet."** Chevy Chase, MD: FDC Reports. Weekly. \$280.00. ISSN 0279-1110.

"The Rose Sheet" provides executives in the toiletries, fragrances, skin care, and related industries with pertinent regulatory, legislative, scientific, financial, and legal news. Reports are given on marketing, new product introductions, line extensions, promotions, and advertising activities on the retail level. Also included is a Trademark Review, a compilation of cosmetics-related product trademarks registered and filed with the U.S. Patent and Trademark Office.

943. **Topics in Hospital Pharmacy Management.** Gaithersburg, MD: Aspen Systems Corporation, 1981-. Quarterly. \$61.00. ISSN 0271-1206.

Each issue of this periodical treats a single topic of interest to the hospital pharmacy manager in a practical, state-of-the-art fashion. In addition to nine or ten articles per issue, there are book reviews, letters, and notices of meetings.

Topics recently covered include managing supportive personnel, computer systems, financial management, hospital pharmacy systems, and home health care.

944. **Toxicology.** Amsterdam, The Netherlands: Elsevier Science Publishers, 1973-. Monthly. \$484.00. ISSN 0300-483X.

Called "An International Journal Concerned with the Effects of Chemicals on Living Systems," this journal publishes original scientific papers dealing with the biologic effects on tissues arising from the administration of chemical compounds, principally to animals but also to humans. These compounds include food additives, pesticides, drugs, chemical contaminants, consumer products, and industrial chemicals and their residues. Results of safety evaluation studies are also included.

The intended audience includes toxicologists, pharmacologists, and epidemiologists. Review articles and announcements are included.

945. **Toxicology and Applied Pharmacology.** New York: Academic Press, 1959-. Monthly, except semimonthly in March, June, and September. \$410.00. ISSN 0041-008X.

An official journal of the Society of Toxicology, this periodical publishes original research reports pertaining to action on tissue structure or function resulting from the administration of chemicals, drugs, or natural products to humans or animals. The papers address mechanistic approaches to physiologic, biochemical, cellular, or molecular understanding of toxicologic/pathologic lesions and to methods used to describe these responses. Papers dealing with alternatives to the use of experimental animals are encouraged.

A few short reviews on subjects of timely interest to toxicologists are also included, as are communications, announcements, and letters to the editor. There are 17-18 articles per issue.

946. **Toxicology Letters.** Amsterdam, The Netherlands: Elsevier Science Publishers, 1977-. Monthly. \$50.70. ISSN 0378-4274.

Said to be "an international journal providing a forum for original and pertinent contributions in toxicology research," this journal provides a means of rapid publication for important scientific contributions in all areas of toxicology, including the experimental toxicity of pharmaceutical, surgical, food, tobacco, agricultural, and

industrial products and the investigation of environmental hazards to man, domestic animals, and wildlife. There are 17-18 short papers per issue. The intended audience includes toxicologists, pharmacologists, and cancer researchers.

947. **Toxicon.** Oxford, England: Pergamon Press, 1962- . Bimonthly. \$230.00. ISSN 0041-0101.

Called "an international journal devoted to the exchange of knowledge on the poisons derived from animals, plants, and microorganisms," this is an official journal of the International Society on Toxinology.

It provides a medium for the publication of a rather extensive range of materials such as the following: (1) Papers on the chemical, pharmacologic, zootoxicologic, and immunologic properties of natural poisons; (2) Clinical observations on poisoning where a new therapeutic principle has been proposed or a superior clinical result has been obtained; (3) Material on the use of toxins in studying biologic processes and on subjects related to venom-antivenin problems; and (4) Occasional review articles on problems related to toxinology.

948. **Trends in Pharmacological Sciences.** Amsterdam, The Netherlands: Elsevier/North-Holland Biomedical Press, in association with the International Union of Pharmacology, 1979- . Monthly. \$153.85. ISSN 0165-604X.

Intended for pharmacologists, toxicologists, clinical pharmacologists, medicinal chemists, and related scientists, this journal publishes short articles indicative of trends in the field, the major issues, and developments in all aspects of the subject. There are reviews, news articles, features, letters, and a rather extensive book review section.

At the end of each year there is a bound "library compendium" published comprised of the review material from the 12 monthly issues.

949. **U.S. Journal of Drug and Alcohol Dependence.** Hollywood, FL: U.S. Journal of Drug and Alcohol Dependence (2119-A Hollywood Blvd., Hollywood, FL 33020), 1977- . Monthly. \$27.00 per year.

This tabloid-sized periodical is similar to *The Journal* issued by the Addiction Research Foundation (see entry 836). It covers news and current concerns, social and political, on all aspects of drug and alcohol abuse. It also provides coverage of conferences, interviews with leaders in the field, and reports on federal legislative news regarding funding, regulations, and programming. Comments on advances in research, treatment, development, preventive education, and enforcement policies are included.

950. **U.S. Pharmacist: The Journal of Drug Therapy and Patient Information.** New York: Jobson Publishing, 1976- . Monthly. \$25.00. ISSN 0148-4818.

Intended for the practicing pharmacist, this journal publishes articles of interest to the clinical pharmacist and includes a review of new drugs, a digest of medical facts and news, and a postgraduate pharmacy/continuing education section.

A hospital edition is also published that is identical to the regular edition except that it has a special section included with material specifically for the hospital pharmacist.

951. **Veterinary and Human Toxicology.** Manhattan, KS: American Academy of Veterinary and Comparative Toxicology, Comparative Toxicology Laboratories, Kansas State University, 1958- . Bimonthly. \$30.00. ISSN 0145-6296.

This publication has had several other titles in the past. It is sponsored by a number of organizations as follows: the American Academy of Veterinary and Comparative Toxicology, the American Academy of Clinical Toxicology, the American Association of Poison Control Centers, the American Board of Medical Toxicology, the American Board of Toxicology, and the American Board of Veterinary Toxicology. Other groups active in the toxicology field support it also. The material published relates to the broad field of toxicology, including news items and announcements, original research papers, scientific reviews, and field observations in domestic and wild animals or man. Also published are meeting papers and those of general educational value to toxicologists and related scientists. A number of book reviews are included.

952. **Voice of the Pharmacist.** Memphis, TN: American College of Apothecaries, 1957- . Quarterly. \$15.00.

A four-page newsletter, this publication contains material of interest to practicing pharmacists. It includes some clinical information, announcements, report of American College of Apothecaries activities, and cost and economic information.

953. **Washington Drug Review.** Washington, DC: Resources News Service (363 National Press Bldg., Washington, DC 20045), 1970- . Monthly.

This newsletter merged with (as of October 1976) and now incorporates *Drugs and Drug Abuse Education News*. It provides key information from Washington on treatment and research phases of the drug abuse field. News of federal activities, trends, policies, and funding in the field is reported.

954. **Weekly Pharmacy Reports: "The Green Sheet."** Chevy Chase, MD: FDC Reports, 1951- . Weekly. \$20.00.

A brief, four-page newsletter, this publication reports on legislation, regulations, and related matters that affect pharmacy practice. Included is news on the introduction and pricing of new pharmaceuticals, government regulatory activity, federal and state legislation affecting pharmacists, lawsuits of concern to pharmacists, and national and state pharmacy association meetings.

955. **Wholesale Drugs Magazine.** Indianapolis, IN: Wholesale Drugs Magazine, 1948- . Bimonthly. \$6.00.

Formerly called *Wholesale Drug Salesman*, this is said to be "the only publication exclusively devoted to wholesale drug marketing." It is intended to appeal to wholesale drug salesmen and executives, covering drugs, toiletries, and sundries. There are also meeting notices and news.

956. **Xenobiotica: The Fate of Foreign Compounds in Biological Systems.** London, England: Taylor and Francis, 1971- . Monthly. \$370.00. ISSN 0049-8254.

This is an international journal that publishes original papers concerning research into the metabolic fate of foreign compounds in biologic systems. It is concerned primarily with the absorption, metabolism, and excretion of drugs, but it also includes

papers dealing similarly with pesticides, food additives and contaminants, industrial chemicals, and carcinogens. Aspects concerning chemistry, pharmacology, toxicology, and clinical medicine are also included where relevant to the metabolism of drugs or other foreign compounds, as are papers dealing with techniques and methodology.

English is the preferred language for the contributions, but French and German articles are acceptable. There are about seven articles per issue, and editorials, book reviews, and announcements are also included occasionally.

957. **Yakugaku Zasshi.** (Journal of the Pharmaceutical Society of Japan). Tokyo, Japan: Pharmaceutical Society of Japan, 1881- . Monthly. \$55.00. ISSN 0031-6903.

The text of this scientific journal is in Japanese, but summaries and contents pages are in English. Regular articles and reviews are published with the regular articles grouped in these subject areas: chemistry, biology, pharmacy, and pharmacology.

958. **Zentralblatt für Pharmazie, Pharmakotherapie und Laboratoriumsdiagnostik.** Berlin, East Germany: Verlag Volk und Gesundheit, 1970- . Monthly. M 144. ISSN 0049-8696.

This East German publication contains original articles and sections of brief information and abstracts/literature overviews. Symposium papers are occasionally included.

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